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ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1968

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CEMA COOPERATION IN ENERGY PRODUCTION STRESSED

Interconnected Electric Systems

Bratislava PRAVDA in Slovak 30 Oct 79 p 7

[Article by J. V. Sveca, regular Budapest correspondent of Pravda: "The Largest Interconnected Power System: The 750 KV Line--A Work of Fraternal Cooperation by the Socialist Countries"]

[Text] Nearly 9 months ago, at the beginning of this year, the 750 KV long-distance electric line Vinnica (USSR)-Albertirsa (Hungarian People's Republic was put into trial operation. Today, 30 October, on the eve of the 62nd anniversary of the great October Socialist Revolution, this work of fraternal cooperation of the socialist countries--the USSR, Bulgarian People's Republic, Hungarian People's Republic, German Democratic Republic, Polish People's Republic, Czechoslovak Socialist Republic--is being formally dedicated for permanent operation. This is undoubtedly a moment of historical significance in the power industry--after 3 years of construction and testing, this work means that at present in the countries of the CEMA the world's largest electrical switching system is working, reaching a capacity of 300,000 MW. With the introduction of the 750 KV electrical line into operation the capacity for transporting electical energy from the USSR to the socialist countries was raised by 1,200 MW. Since the individual power systems are also always guaranteed significant reserves, each of the interested countries is spared their own construction of an energy project with a capacity of 1,500 MW.

The parallel work of the United Power System of the countries of the CEMA and the United Power Systems of the USSR provides a clear increase in the reliability of the supply of electric power and the efficiency of the work of the electric systems. Thanks to this capacity--and also as regards the exploitation of the difference in time of the minimum and maximum loads (quite clear differences of the rising and setting of the sun), for example already today as much as 9 million KW of electrical capacity have been spared.

For us, the CSSR, this event is especially significant also in spite of the fact that we belong among those countries with significant production of electric power. At present we are in fact one of the states where consumption of power also belongs to the highest in the world. During the last

30 years it has grown 29-fold...well and it is obvious then that we always greet the opportunity to build new capacity for the production of electricity not only at home but also abroad, repaid by participation in the construction of high-capacity transfer facilities of the creation of large interconnected electrification systems.

The proof of this is also our participation in the construction--and later also in the operation--of the Chmelnicka nuclear electric power plant on the land of the USSR. In the construction of this project the Hungarian People's Republic, German Democratic Republic, Polish People's Republic, and the USSR are also participating. These countries are also cooperating in the construction and operation of the electric power line with a voltage of 750 KW on the road Chmelnicka electric power plant (USSR)-Rzeszow (Polish People's Republic), along which will be transmitted electric power to the participating countries. In conjunction with the long-term goals other electric power plants in the USSR and in other countries of the socialist community will be built and the construction of hydroelectric sources and plants with solid fuel.

But let's return to today's events, to the formal dedication of the integral construction of the CEMA--the 842 km long line Vinnica-Albertirsa. In determining the conception of this great action with the framework of the CEMA the demanding task fell to the Hungarians: to build a 270 km long section of this 750 KW line and a transfomer station 750/400 KV in the Albertirsa district. It must be said that all the Hungarian enterprises, all their workers thanks to diligent work, by fulfilling the socialist pledge in honor of the 34th anniversary of the liberation of the country and the 30th anniversary of the founding of the CEMA performed the task really very well. They so perfectly layed the foundation that the most prominent BSP [expansion unknown], the workers' collective and individuals are receiving high state and resort distinctions, that the representatives of the Hungarian enterprises which had participated in this construction, unprecedented in the history of the country, are receiving recognition and sincere congratulations.

It would be inappropriate if we did not mention at this occasion also how Czechoslovakian workers participated in the creation of this power network. In the 750 KV construction alone we participated financially and also with real concrete cooperation; however, our principal participation was in the construction of the interlocking network. This was the construction of the continuation of the 750 KV line, and concretely the 400 KV section Albertirsa-God, by which electric power comes to us. This task was fulfilled excellently. Surely the date of completion of 65 km power line was set for 1 February 1979, but our construction people turned it over already on 12 October 1978, almost 4 months early.

And finally today, on the occasion of the formal dedication of the Hungarian section of the 750 KV electric line, it is also necessary to mention the long standing tradition of cooperation in the power industry between the CSSR and the Hungarian People's Republic. Already in 1952 cooperation was realized in the exploitation of the 110 KV line Nagyigmand-Nove Zamky, later in the construction and exploitation of the 220 KV line Bystricany-Vac, further the 400 KV line Levice-God, and in the fall of 1978 the other 400 KV line Podunajske Biskupice-Gyor. Cooperation truly broadened gradually to the fraternal countries. In 1963 the interconnected electrification system Mier with the participation of the western Ukraine, the CSSR, the Hungarian People's Republic, and the other countries of the CEMA was created. At that time also a central dispatching organization with its headquarters in Prague was formed.

Thus consequently conditions were gradually created also for further, grandiose development of multilateral cooperation of the countries of the socialist countries in such important sectors, which power undoubtedly is. Todays celebration by our southern neighbors is thus a significant event, an important landmark of this cooperation for all socialist states. Because it is unquestionable and real that this significant component of socialist economic integration, which the fraternal countries are realizing within the framework of the CEMA, will also be further dynamically developed.

Danube Water Works

Prague HOSPODARSKE NOVINY in Slovak 9 Nov 79 pp 1, 4

[Article by Rudolf Rohlicek, Deputy Premier of the CSSR: "The Construction of Water Works on the Danube"]

[Text] The construction of the system of water works Gabcikovo-Nagymaros belongs among the significant long-term tasks of our country's economic policy. Its importance is further multiplied also by the fact that construction involves international socialist cooperation where deadlines of international agreements for joint construction and operation of these projects with the Hungarian People's Republic bind us.

Until now more than 5 million tons of coal energy in the form of unused water power has been leaving our republic yearly, which we could gain in power sources with capacities above 5 MW and at least 1.5 million tons of this coal in power sources with lower capacities. With the construction of the system of water works on the joint Czechoslovak-Hungarian section of the Danube, we would exploit more than one quarter of this hydroelectric potential.

The hydroelectric plants installed will add to the Czechoslovak power network 50 percent of its entire capacity. This is almost 1.5 billion KW hours yearly. This is not a negligible quantity when we realize that for the production of this quantity of electric power in steam generation plants, it would be necessary to use according to a rough estimate 1.5 million tons of coal yearly.

The fact, that the transportation effect on the water ways in comparison with other systems requires on the average one third of the energy demands, only underscores the need to improve navigational conditions on the common

Czechoslovak-Hungarian section of the Danube which is the fundamental prerequisite for the development of internal and international Czechoslovak water transportation.

We must continually and most urgently consider also the potential effects in the area of agricultural production in this part of the Western Slovak region, especially the great reserves that regulation of the water system, will make it possible to use in this otherwise climatically very favorable region. This is a question which has basic political significance as regards the development of the growth of prices of foodstuffs on world markets as well as for our goals in agricultural production and in feeding the people.

The international significance of the system of water projects also underscores the fact that two neighboring socialist countries, the CSSR and the Hungarian People's Republic, will take part in equal shares in its preparation, realization, and exploitation; and that the construction on both sides is being realized with active aid by the Soviet Union and at that with technical aid and with supplies of critical technological equipment.

Given the not insignificant tasks of the Soviet hydroelectric industry at home and given the constant interest in the export of this technology also to the non-socialist states of the world, we regard the Soviet supply as a high sign of international aid which makes it possible for the limited Czechoslovak production capacity to be used to solve other urgent needs. From the Czechoslovak organizations and the responsible workers we expect that from our side of this cooperation will be prepared without loss of time and without conflict.

What Are The Previous Results?

In conjunction with the state plans for the sixth five-year plan, in May of last year the preparatory work for the construction of the water works Gabcikovo-Nagymaros began. Their task is to prepare the construction organization in the organization, expert, and staff aspects, to prepare the social and operational conditions for the construction workers, and to begin with the preparations of the land for full development of the works.

According to the directives of the state plan for 1978-1980, it was decided to realize 1.5 billion Kcs. But already in the specifications of the annual plans a decrease in the size of the works occurred. The fact is, however, that this lowered plan was fulfilled by only 74 percent in 1978 and this year's tasks by the end of July were fulfilled by only 41 percent for the entire year. In the construction of comprehensive housing facilities last year's plan was fulfilled by 28 percent and this year after 7 months by 55 percent of the entire year's goals. The lower size of the works in the annual plan and their insufficient fulfillment signal that conditions have not been created for the full development of the works resulting from the construction schedule.

We cannot be entirely satisfied with the agreed-upon size of the construction work for the year 1980. The supply organizations for the system of water works accepted a volume of work for 585,000,000 Kcs in spite of the fact that the Sixth Five-Year Plan and the directives for 1980 reckoned originally with a volume of construction work at a level of roughly 1 billion Kcs. We assume that this decision in essence does not affect the objective progress of the construction listed in the schedule. In the comprehensive accommodation facilities the suppliers accepted a volume of work at a value of 105,000,000 Kcs, which is only 68 percent of the planned volume. As one of the reasons for accepting the smaller volume, they gave problems with accommodating and feeding the construction workers.

As far as the preparation of the project is concerned, we assume that projections are already approved for the first and second construction. The principal question for developing further documentation is to insure the projected prerequisites of the technological deliveries for the electric power plant at Gabcikova from the Soviet Union. According to the results of the discussions in Moscow in May of this year, the Soviet side will supply foundations gradually until June 1980. The supply relations in energy technology are still unsolved. Until now we have not successfully concentrated on building construction capacity, capable of surmounting the volume of work as the construction schedule and the network diagram demand which are derived from the basic deadlines agreed upon in the international discussions.

Project Preparation Is Important

Much work has already been done for which the workers and engineers who are working diligently on this great project deserve recognition. In spite of this, however, the fulfillment of the plan is not satisfactory and demands more active and coordinated progress to insure the goals for future periods.

The basic prerequisites of smooth progress to realize such extensive, technically demanding construction as the system of water works Gabcikovo-Nagymaros is timely and high-grade project preparation. A period of several years of work precedes it on detailed studies, which in their extent, complexity, and depth of development have no analogy in any of our previously built water works. We expect that this gigantic investment of scientific and technical knowledge of our leading specialists together with the results of consultations with Soviet specialist at this time will be fully used for the acceleration and the raising of the quality of the project preparations of individual constructions in the established order and deadlines.

For this, it is necessary to concentrate the efforts of the collectives of the most capable designers regardless which variant they supported during the discussion. Great responsibility rests on the directing workers of the general architect and on the participating suppliers for the performance and the professional structure of these collectives to fully meet the significant and challenging tasks. Their coordination makes possible systematic operation with the construction. Probably, it cannot be done without organizing a permanent design group at the construction site capable of temporarily and operationally solving the current problems on site.

As regards the above mentioned multilateral designations of the water works, the significant number of the participants in the construction, and given the extensive international cooperation in its realization, we place extraordinary emphasis on the close cooperation of the investing organizations and of all the suppliers with the general architect, above all on the timely turning over of the indispensable foundations for the project preparation of the individual constructions. We cannot permit the project preparation of such a significant construction, which is a mandatory task of the state plan, to be hampered by laggard clarification of technical or price questions, changes of suppliers, additional demands for changes in the construction, of materials, etc.

With some geological and hydrological characteristics of the land, on which we are realizing this system of water works on the results of the detailed geological examination has basic significance for the successful progress of the project preparations. Therefore, we place great demands on the promptness and quality of the examination work and on the cooperation of the designers with the appropriate specialists. The goal must be the greatest lowering of the risk of the occurrence of seepage and other possible faults, which we subsequently removed on some previously built water works with great outlays of capacity and financial means. This implies preferentially application of progressive methods of designing, calculating techniques, and other technical means for the rationalization of designing. It is necessary to use standard and repeated designs, and this for some objects of our own water works as well as for arranging the building site and the comprehensive accommodating of the equipment.

The result of the effects of the effort of all the participants in the construction to a significant degree depends on the coordination of all the operations and on the level of the organization of the entire construction. This demands full use of our previous experiences from other great constructions. The construction of water works on the Danube is in its extent, complexity, significance on the level of the construction of the nuclear electric plants, of the transit gas line, and other large constructions. Therefore, the government decided to name a state representative for this construction whose chief task is to coordinate the activity of the participants on all levels of management. This, however, in no case substitutes for the responsibility for coordinated progress and a high level of organization work by the specialized state organs, by the general managements and the enterprises. The successful progress of the construction depends precisely on their cooperation and consistent fulfillment of their obligations.

The Maximal Exploitation of Mechanization

For this it is necessary first to concentrate for the beginning major attention on the maximum use of the capacity and technical means which the individual organizations at present already have at their disposal. The priority and preference which have been given to the construction must find reflection also in their giving the best and most productive which they have in human strength as well as in material resources for the benefit of the water works on the Danube. It is understandable that with the development of work on the construction it will be necessary to increase the potential at the construction site. It is not possible, however, to go only the road of extensive development on the basis of newer and newer demands, but primarily to go the road which the Sixth Plenum of the Central Committee of the CPCZ outlined for development of the Czechoslovak building industry.

One of the questions constantly discussed is the extent of the indispensable performance of the building organizations by mechanical means. Correctly, criticism is raised against our machine-tool suppliers, that the planned supply is not being fulfilled uniformly and that it is accumulated in the last months of the year. With equal intensity, however, it is necessary to occupy ourselves with arranging and using this technique, which the construction organizations already have at their disposal. Certainly in this area it is essential to proceed from the directives of the Sixth Plenum of the Central Committee for increasing the timely exploitation of mechanical means and complete machine systems and of specialized worker collectives. This plus a high degree of exploitation of the most productive but also the most expensive techniques cannot be achieved within the limits of individual construction problems, rather it is necessary to direct them comprehensively from the point of view of the entire construction. From this the need for planning and daily evaluation of the timely exploitation and performance of the critical mechanisms and their technological systems results. Analysis of the expert and timely exploitation of machines on the construction of the water works points to irregularities and fluctuations behind which significant unused reserves are hidden. We cannot, nevertheless, be satisfied with the fact that with the growing number of power shovels and bulldozers their use is falling, nor with the repeated frequent breakdowns of machines in the production and supply of resources. This deserves the greatest attention of the technicians and organizers of the construction; here there is room for the application of the workers' initiative. Understandably, working morale is also connected with this the exploitation of work time, and insuring of such shifts which are demanded by the peak time demands of the machine system and time course of the construction.

They are reviewing also the possibility of mutual cooperation with the Hungarian People's Republic to purchase large construction machines, their coordination for joint use also under review is the joint specialized maintenance of these machines and mechanisms and also the mutual supplying of building materials within the joint construction framework. These proposals and suggestions would be useful to realize the common effort and in [meeting] the annual and five-year plans of both countries.

Emphasis on Quality

The high technical demands of the water projects, resulting from the complex geological conditions and unique solutions and multilateral requirements, necessitates dedication of extraordinary attention to the quality of the preparation and to realize all these works. Beyond this goal it is necessary to create an operative system of management and quality control which insures that each job performed well and will not require subsequent repair. On the contrary it guarantees the operational ability and safety of the entire waterworks system on the Danube.

If we place such high demands on all the builders of the water projects, we must also assume responsibility for meeting their working and living conditions. How the workers and technicians will work and live here depends to a significant degree on their contentment and also with the utilization of their abilities, of the working energy and initiative. We are concerned that here the people will work with joy and feel comfortable also after work, during their well-deserved rest.

Economically and Effectively

At present attention is concentrated on building comprehensive housing facilities, the construction of which was included in comprehensive housing construction framework plans for 1979 and 1980. We expect that the investing organs, the specialized national committees and the Ministry of Construction of the SSR will create the conditions for accelerating the equalization of the marked delay compared to the plan and in this connection will make it possible for the supplier of the construction work, Surface Construction Nitra to concentrate on appropriate attention to these tasks.

Deciding to build comprehensive housing facilities as permanent structures, which after adjustments will serve as housing and other purposes after completion of the construction of the water works is very practical. It would surely mean a great deal if already at this stage the structures built sufficed for all the requirements of the final good, but after the completion of their function as housing for the builders of the water works and other management of the construction site, building alterations and possibly even more will be made for new purposes. Here, too, the principle of greatest economy and efficiency applies.

Therefore, we are also carefully weighing which facilities for service and health care for the builders of the water works. It is most practical to build in concrete conditions as temporary or permanent structures and which can be most practically and economically insured by mobile facilities such as mobile dental clinics, libraries, stores, etc., which frequently can be better supplied directly to the workers at the construction site with minimal loss of their working and free time. In creating the living and working conditions for the builders of the water works, therefore, it is fully practical to use the initiative and experience of the national committees and social organizations.

Here, the project organizations have the chief responsibility. We expect them to exchange with the investors and suppliers information collected from the stage of explaining the conceptual questions to the concrete project solutions. We demand the suppliers actively participate in the projection work and logically weigh their own preproduction preparations. Such joint cooperation is the foundation of a quality technical system for construction, for the application of modern methods of management according to network graphs with the aid of computer technique.

The construction of the Danube water works clearly affects the lives of the citizens and the activities of the enterprises and organizations which live and operate in the three Danube districts of Komarna, Dunajska Streda and Bratislava-rural. Therefore, in solving the entire series of problems in the area of investors, projection, and construction preparation, selection of workers, and creating their working and social conditions, we will not do without the active help of the specialized organs of the national committees and organizations of the National Front, operating in these districts.

We are concerned that these organs and organizations regard the system of water works as their primary concern, which in the future will contribute to improving the standard of living and living conditions of the citizens. For this reason the demand that these organs and organizations strive for the creation of a quality network of services, of local food transportation and of other conditions is proper to make the entire area of this gigantic construction site attractive. This is one of the singificant stimuluses for gaining and holding workers for the construction and for the operation of the entire Danube water works system.

The party and state leadership truly expects all management levels and individual supply organizations to concentrate their strength so that they can contribute to the successful realization of this great project.

9329
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PARTY ORGAN EDITORIAL VOICES CONCERN OVER SOIL EROSION, POLLUTION

Sofia RABOTNICHESKO DELO in Bulgarian 18 Nov 79 p 1

[Editorial: "Let Us Respect the Land"]

[Text] The land is one of the greatest national riches.

Since time immemorial it has been for us the "food basket" and we identify it with the most valuable thing in life, the mother. The Bulgarian land justifiably deserves this esteemed name. For centuries it has fed and clothed our people and for this reason our people defend it with their blood, wet it with their sweat and make great efforts to keep it fertile and generous to them.

The people's government has done a lot in transforming our native land. The soil has been enriched by modern scientific methods and its yield has increased several times. Regardless of all efforts the land remains always under the open sky, exposed to the dangers of erosion and other unfavorable phenomena. In this respect the facts are alarming. The arable land gives way to the growing needs of industry. During the last 15 years alone, over 1,400,000 decares of arable land have been lost. The non-arable land, which is one of the reserves of our agriculture, is also decreasing. Thus, while 30 years ago we had 8 decares of land per person, now we have only 5.6 decares.

Soil erosion is one of the worst enemies of the land. In this respect (to our regret) we have taken one of the leading places in Europe, namely, 50 percent of our land is threatened by erosion. Most alarming is the situation in the Eastern Rodopi Mountains, The Struma riverbed, Sakara Mountain, Strandzha Mountain, and the Danubian lowland.

The enemies of the soil are many. The waters of most of our rivers are highly polluted. Air pollution is also harmful to the natural makeup of the soil. We must also mention another unpleasant fact, i.e., the wide application of pesticides used against weeds and pests.

The examples that show lack of respect for the land are many. And when we add to them the forecasts of the experts, i.e., that industry and construction will claim 2.2 million decares more up till the year 2000 for building of new plants, dams, canals and roads, the situation becomes even more alarming. It is obvious that our socialist society must take even more drastic and effective measures for protecting the soil. Otherwise, we will unduly burden our future generations.

Our party and the people's government have always devoted great attention, and they continue to do so now, to protection of the environment, including the land. Many governmental regulations have been enacted strictly sanctioning those who abuse and deplete the land. A long-term national program will be ready by the end of this year which will embrace all necessary undertakings for even more efficient struggle against erosion and water and air pollution. Each agroindustrial complex already has at its disposal a soil map of its land together with an agroproduction analysis. However, in order to increase the feeling of responsibility for land preservation in each worker in the socialist society, we must also strengthen the consciousness, develop a national movement, and prepare the ground for a real fight against the air, water, and soil polluters. This is an obligation on the part of the party committees, the Fatherland Front organizations, DKMS [Dimitrov Communist Youth Union], the trade unions and the cultural circles.

The Bulgarian land has always responded generously to all measures for its protection. The greater our respect toward it, the more generous her yields will be. We are urged to care for the land and protect it even better by the ordinance of the Central Committee of the BCP and the Council of Ministers of 10 November of the current year, which categorically proves that the increase of the national wealth depends on the consciousness and discipline, and on the labor effectiveness of each citizen of the socialist society.

1010
CSO: 5000

OVER 900 NEW COMBINES FOR CSR IN 1980

Prague ZEMEDELSKE NOVINY in Czech 3 Dec 79 p 1

[Article by F. Savev: "To Know the Requirements"]

[Text] The autumn work has ended. It may be said that the agronomists do not recall better progress in sowing, plowing and fertilizing with stable manure and chemical fertilizers. Along with the good organization of work, the weather contributed greatly, helping in many places overcome technical problems and above all, shortages of sowing machines and trailers for heavy wheeled tractors. In recent days the new growth of the winter wheat began turning green. It had not been sown until the second half of October and its sprouting was delayed by the cold weather. At the sight of the green wheat a question suggests itself: How to assess the progress of this year's harvest from the viewpoint of mechanization, and how much new technology and spare parts will be available next year?

It is a fact that at the beginning of this year's harvest there were 500 unrepaired combines in our agricultural enterprises. In simple terms, at the last call to harvest all the necessary machinery was not available. We must prevent such an occurrence next year. For that reason, the Central Enterprises of Agricultural Technology are now collecting requisitions for spare parts from agricultural enterprises by mediation of okres agricultural administrations.

The post-season inspections of self-propelled combines should be about completed now in all cooperatives and farms. In fact, what is of primary importance at this time is to find out how many, and what kind, of spare parts will be actually required. The Central Enterprises of Agricultural Technology will order them and according to the number of requisitions confirmed to the supplier the tractor stations and agricultural enterprises may be promptly informed which parts will be in short supply in the stock. This is the situation from which we must now proceed. Even the mechanizers cannot do in the future without restoration of those parts that will not be available. Repair work cannot be put off.

Alois Stichauer, director of the Central Enterprises of Agricultural Technology in Tyniste nad Orlici, which plant has the distribution and sale of parts for combines, mentioned that there cannot be any hope of fulfilling every requisition even next year. Model E 512 combine alone requires 1246 spare parts. Said plant supplies all krajs in the CSR also with new self-propelled combines. The CSR will import next year 400 model E 512 combines, 400 E 516 combines, and 136 model Gloria threshers for mountainous areas. Nevertheless, even next year we shall not have enough grain harvesting technology to spare.

For that reason, when assigning the limits, more emphasis should be put on reducing the differences in the hectares-per-machine ratio. After all, in some okreses in the CSR one combine services only 60 hectares, while in other locations the load is more than 130 hectares. The unequal distribution of equipment generates considerable problems when negotiating contracts of cooperation between individual okreses and krajs. Many mechanizers share the opinion that with a more even workload for the combines, harvest cooperation could become more economical not only in terms of losses in passage but also in fuel consumption.

9004
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UNDERUTILIZATION OF COMPUTERS CRITICIZED

Prague HOSPODARSKE NOVINY in Czech 2 Nov 79 p 4

[Article by Jan Laitl and Karel Lux, Federal Bureau of Statistics]

[Text] The utilization of computer technology in management makes management work more efficient, enhances the quality of management work and makes decisionmaking processes more objective. In many cases the use of computer technology has produced direct benefits, especially in the form of increased profits, the conservation of manpower resources, increased output volume, reduced costs and lower inventories, and a reduced demand on the part of management for administrative support services. But this does not mean that in all areas where computer technology is being put to work, regardless of whether we are talking about plans for the introduction of automated data processing, the operation of computer technology and the utilization of computer data output or about the training of personnel, everything is working out well or that there is no room for improvement. Some of the problems that exist in these areas were the focal point of an investigation into the level of development and the utilization of computer technology in the CSSR.

At the end of 1978 there were 2,055 organizational bodies equipped with computer technology. This total figure includes 36 enterprise management staff units serving enterprises specializing in the production of computer hardware, 48 special-service organizations which perform functions related to the installation of computer hardware, 881 computer centers equipped with digital computers, 97 analog laboratories, 7 hybrid computer laboratories, 102 computer laboratories equipped with process control computers and 884 data processing centers equipped with miscellaneous kinds of computer hardward (most of which are engaged in the collection and preliminary processing of data).

However, the actual number of user organizations exceeds the figure quoted above by several times over. The respondents to a survey conducted in connection with the nationwise "Computer Center" seminar, which is organized every year by the Czechoslovak Scientific and Technical Society and the Computer Research Center in Bratislava, pointed out that only 26.6 percent of these centers are working exclusively for one organization. Roughly 25 percent of them are working on a regular basis for from 2 to 5 organizations and the rest work on a regular basis for 10 or more organizations.

All in all it can be estimated that there are nearly 9,000 organizations in the CSSR which are utilizing computer technology. While 2 years ago these various computer centers were engaged primarily in the processing of bulk data, nearly one-third of them are now engaged primarily in the practical application of automated information or control systems.

At the end of 1978 records showed that Czechoslovakia had 1,194 digital computers, 211 punchcard computers, 454 minicomputers, 161 process control computers and 679 machine assemblies controlled by punchcards. By the start of the Seventh Five-Year Plan more than 330 of the computers now in use will be worn-out and technologically obsolete, that is, they will be more than 8 years old.

Relatively positive results are being achieved as a result of increased spending on computer technology which is geared more toward the incorporation of solid-state electronic computer technology. In contrast to the record of past years there has been an increase in deliveries of minicomputers, including the first-generation minicomputer models manufactured in the socialist countries (the SMEP series). Nevertheless, the fact remains that the number of on-line minicomputers, which can be used effectively also for the collection of data and for the control of technological processes, is not as high as it should be in relation to world levels.

The bottleneck--which is limiting the usability of computers and the overall labor productivity of computer centers--consists in the availability of machinery and equipment for the retrieval and collection of data. The conventional punchcard and punchtape technology continues to hold sway in this area. The number of modern systems (single-keyboard data programming terminals, machine-readable systems, symbol readers, data retrieval keyboards for collection systems) account for not quite 7 percent of all computer systems.

More than 10,000 workers are employed in jobs involving the use of conventional data retrieval technologies; when we take into account the fact that the labor productivity of modern systems is two to three times greater in addition to the fact that this machinery often makes it possible to directly record input data on machine-readable carriers, we find that there is a considerable manpower reserve in this area.

In most computer centers (probably 53 percent) data are centrally retrieved on conventional carriers. In not quite 30 percent of all cases data for a computer center are retrieved by a decentralized user and transmitted to the computer center on machine-readable data carriers. The centralized retrieval of data on magnetic tapes in the computer centers themselves accounts for less than 8.5 percent of their total workload. At the present time the percentage of time spent on the preparation of decentralized data and their transmission to computer centers is very low (3 percent).

The shortage of machinery and equipment for the retrieval and collection of data is major obstacle standing in the way of the rationalization of labor. In spite of the numerous measures which have been adopted (including measures adopted by the government of the CSSR) we have not yet been able to find a satisfactory solution to this problem. And yet, to cite just one example, the storage of data on so-called minidiscs, which were introduced at this year's computer technology fair in Moscow by representatives of Zbrojovka-Brno, was one of the most popular exhibits. However, according to statements made by representatives of the NOTO [expansion unknown] production enterprise and organization, plans have not yet been finalized for the production of this equipment, and it cannot be expected that a satisfactory design will be developed before 1983.

The time it takes for computers to be brought on line is too long; in the case of many solid-state electronic computers the average time span between the delivery of computers and their on-line startup ranges between 7 and 9 months. At the same time computer deliveries tend to pile up around the final quarter of a given year. In 1978, 41.7 percent of all digital computers were delivered during the fourth quarter, and of this number 22.7 percent were delivered during December. All of this has an adverse impact on the prompt installation and startup of computers. Nor is the current practice of concluding two commercial contracts (one for the delivery and one for the installation of computers) doing anything to help synchronize these two services.

Design and program planning work is an important part of the work performed by computer centers engaged in regular utilization of technical resources. One factor which is contributing to greater efficiency in this area is the libraries in which finalized programs or segments of programs are stored for later use. Research has shown that 11 percent of the surveyed computer centers have not made any provisions for the establishment of a computer program library. Wherever such libraries are maintained, two-thirds are organized on a divisional basis. In every case only 10 percent of all computer centers maintain library holdings of standard programs and program modules, that is, those factors which make it possible to maintain consistency in ongoing programming work.

The most frequently used programming language is COBOL (42 percent) followed by PL/1 (18 percent), ASSEMBLER (13 percent), FORTRAN (12 percent) and ALGOL (4 percent). Nonstandard languages account for barely 10 percent of all the programming languages in use. All of this tends to limit opportunities for any kind of regular exchange of programs among computer centers.

On the other hand, the use of standardized programming languages (accounting for 20 percent of all computer-use time) and structured and modularized languages (up to 15.5 percent of all computer-use time) is fairly widespread. Nearly half of all computer centers (mainly at the enterprise level) are not as yet using any of the abovementioned methods. Controlling the job performance of programmers is another serious problem. Thus far only 10 percent of all computer centers have set standards for the evaluation of their employee's performance.

Work performance could be increased by means of the organized exchange of computer programs among computer centers. Thus far only 16 percent of all computer centers exchange programs on a regular basis and most of these are general service computer centers. This situation could be improved solely insofar as provisions are made whereby program sharing plans will be managed by a suitable organization (accredited by NOTO, i.e., the Office Machines and Datasystem organizations) and this would cover the full range of available programs and all models of the most commonly used computers.

The system of standardized programs used to process the basic functions performed by automated information and control systems should continue to account for a significant share of our stock of programs. But in order to use these programs it will be necessary to take action far enough in advance aimed at completing work on the simplification and standardization of individual key algorithms and building up a network of uniform data bases. The quality of our current stock of standardized programs is not good enough and this is in spite of the relatively major breakthroughs scored by the MARS and ISRT [expansions unknown] systems that were developed for the EC 1021, EC 1030 and EC 1033 computers as a part of government sponsored research projects designed to meet the needs of enterprises, especially engineering enterprises.

Most of the programs developed thus far were designed to accommodate the so-called batch processing of data. The further advancement of automation is being hampered by the lack of a stock of programs compatible with more advanced data processing systems (data-bank systems, interactive systems and so on).

In 1978 digital computers were in service for an average of 3,791 hours, i.e., 91.1 percent of the time available on a two-shift work schedule (compared to 90.6 percent in 1977) and 67.8 percent of the time available for production operations on a two-shift work schedule (compared to 67.2 percent in 1977). During 1978 digital computers were used mostly by general service computer centers and least of all--nearly 50 percent less--by research, special-service and school computer centers. The average annual down time for a single digital computer dropped by 10.1 percent in 1978.

The use of digital computers on a time-sharing basis is not yet as advanced as it should be. At the same time, the utilization of modern computer systems in this way and in a manner commensurate with the quality of their hardware is the most effective means for boosting the output performance ratings of computers. Studies have shown that the potential benefits of time-sharing are taken advantage of on a regular basis only 36.4 percent of the time; 28.8 percent of the time (even though the available technology permits this) the time-sharing regime is not utilized at all. One of the reasons for this are the billing regulations that apply to computer service time which do a sufficient job of discouraging users from taking advantage of this potential.

So there is still a great deal of unused capacity when it comes to the utilization of computers, especially so in the case of enterprise computer centers. Users should make a systematic effort to find ways to increase the time-in-service capacity of computers. It is possible to consolidate computer capacities, for instance, within the framework of economic production units or ministries. The gains that have already been made for example in domestic trade, agriculture and the food industry and in the transportation industry attest to the realism of this option. Indeed by tapping unused computer capacity it would be possible to process monthly wage payments for more than 3.5 million workers.

But there is yet another side to the utilization of computer technology. Namely, the real benefits that would be gained by using computers to make refinements in information and management systems. In spite of the fact that the share of reported work on automated systems accounts for more than one-third of the total volume of the computer operations workload a systematic effort must be made to upgrade the quality of the data that is processed, in particular by utilizing standardized data processing plans, by applying econometric methods and by stepping up efforts dedicated to the coordination and consolidation of data processing programs. To be sure, the realization of these goals must be furthered by measures taken by top management organs. We have thus far been unable to implement the kinds of guidelines and directives which would eliminate the unnecessary duplication of preliminary data processing work and make it possible to set up a uniform set of procedures for data processing and information sharing.

This is also related to the buildup of a backlog of unfinished data processing work during the first few days after the end of a review period (weekly, monthly, quarterly, semiannual or annual periods), while all the rest of the time the demands for computer service are minimal. In addition, modern computers, which are capable of performing complex computational operations, are frequently used to do the kind of work which could be handled by computer with lower performance ratings. And the cost of a unit of information processed on a high-performance system (a cost which is unfortunately difficult to quantify in actual practice) exceeds by several times over the cost at which such information could have been obtained by using a more appropriate system.

At the end of 1978, 55,730 workers were employed in computer centers. The number of newly hired workers amounted to 14,738 (27.9 percent) and the number of workers who quit amounted to 11,805 (22.4 percent). For several years now the turnover rate has been hovering at about this same level and it is primarily due to uneven wage-scale standards. The biggest problem has to do with the recruitment and professional training of data storage and retrieval workers. Very few people are interested in accepting jobs working with conventional keypunch card and tape machines. Problems are also being caused by, among other things, the lists of required qualifications, which insist that workers employed in these kinds of jobs just possess secondary school diplomas. We have not yet been able to take advantage of the lessons that have been learned in this regard in the GDR, where an apprenticeship program has been set up to train workers in the operation of computer machinery and equipment.

Most employees of computer centers are paid on the basis of rationalized wage schedules. In view of the rapid development of computer technology the current wage regulations are quickly becoming obsolete. A majority (55.2 percent) of the respondents to the aforementioned survey stated that the existing system is suitable only in some cases, while 33.3 percent stated that it is totally unsuitable. As a reason for this 71 percent of the respondents stated that this system no longer takes into account the occupational structure of workers employed in these kinds of jobs. The criteria that are currently employed to place computer centers into specific categories are already obsolete and fail to make allowances for current trends in the development and applications of computer technology.

The transition to systems-oriented computer applications and to the development of automated information and management systems requires that we should make an effort to upgrade the level of skills of workers employed in computer centers, especially so in the case of designers and programmers, when it comes to their knowledge in the area of management science. But at the same time it is becoming increasingly necessary that we should also familiarize management personnel with the potential and functions of computer technology, with methods for controlling this technology (especially by remote means) and for using it in conjunction with their own decisionmaking processes. We have not yet achieved any noteworthy results along these lines, and this is in spite of the measures adopted by the ministries of education, in accordance with which virtually all universities have set up courses to train students in the use of automated management systems.

There is a host of other areas in which it would be possible to improve the quality of management work by taking advantage of computer technology. This is why it is necessary to step up the pace of the development of computer technology not only in quantitative terms, but also in terms of the quality of this technology, its dissemination, and the development of a suitable mix of individual kinds of equipment which will make it possible to build up the kinds of computer systems and terminal and computer networks that are needed. We need to make a constant effort to lay the groundwork for the better utilization of computers that have already been installed regardless of whether we are talking about their extensive utilization (by increasing their so-called time-in-service utilization and by making existing capacities accessible to a wider range of users) or, most importantly, about their intensive utilization (by raising standards in terms of the appropriateness of the purposes for which they are used, in terms of the greater usefulness of the information that is processed, in terms of the greater selectivity and faster flow of information and so on).

11813
CSO: 2400

SLOVAK CHEMICAL PLANTS EMPLOY SHCHEKINO METHOD

Slovchemie Trust

Bratislava PRAVDA in Slovak 9 Nov 79 p 3

[Text] As evident from the responses of individuals, collectives and entire enterprises, published to date, interest in introducing and applying to practice the principles of the Shchekino work system is the keenest in the chemical industry. Several enterprises of the Slovchemie Trust have already introduced the system partially, i.e., certain elements of the principles of material self-interest in the permanent rise of labor productivity. But because the conditions for the application of the Shchekino work system under our system of planning are still lacking (from the viewpoint of planning methods), the system's comprehensive application has not begun as yet. According to the practical experience of our enterprises, the following must be ensured for a changeover from partial experiments to the consistent application of the entire system:

A long-term stable production plan, broken down by plants and shops, and ensured with raw materials and supplies;

A stable and long-term plan of wage resources, linked to the production plan;

Modification of the limit on average earnings (now 101 percent);

Revision of the directive on wage forms, with provisions for the remuneration of the workers participating in the Shchekino work system, and specific payroll budgets separately for blue-collar workers and technical-economic workers, and incentives for top officials.

What progress have the individual enterprises of Slovchemie made in their experiments with applying elements of the Shchekino movement?

Matador National Enterprise

The Matador National Enterprise of Bratislava is one of the largest producers of flooring and other rubber products. At the plant for vulcanizing floor tiles, gaskets, nonskid tiles and dielectric carpets, 48 workers had been assigned to the rotary presses, each worker servicing 1.5 machines. By introducing technical measures and assigning one worker to service two machines, labor productivity was increased 30 percent. Here a proportion of the wage resources saved on absent workers was used for incentives. However, the initiative collective was not satisfied with this result; for example, vulcanization in heavy presses involves large and heavy extruded products, and therefore also the curing time in the press is longer. To utilize this relatively "free" time of the workers, it was decided to train them also in the related trades of building and finishing the products. Ten workers are working according to this system. In the finishing and rewinding of flat drive belts, the workers rewind the completed belts, perform the final finishing, and prepare the belts for shipping. The workers assigned to engineering control have to grade the products and check their dimensions; to increase labor productivity in this phase of production, the workers were trained to perform also the final inspection. This saved three workers.

J. Dimitrov Chemical Works

At the Juraj Dimitrov Chemical Works in Bratislava, the collective assigned to the production of bleaching clay has been given incentives to raise labor productivity; the blue-collar workers who grind the bleaching clay also bag the finished product when the grinding mills are not running. As an incentive to exceed the daily norm, also the blue-collar workers assigned to filtering the suspension in the filter presses have been given a higher premium, and even the crane operators acquired the basic skills for the production of bleaching clay. At another plant of the enterprise, the one that produces Burex, the manning norms for each shift do not include substitutes. If the work of the absent workers is performed during the shift, the collective premium is divided among the workers on the shift, provided no overtime is charged. The experience of these two plants confirms that such a system of material self-interest in higher labor productivity, elaborated in detail, produces valuable results, and therefore it should be introduced also at other workplaces within the enterprise.

Slovnaft National Enterprise

For the entire Slovnaft National Enterprise, a premium system has been developed under which premiums are paid the collective if it is able to perform the planned tasks even if the workplace is not fully manned. These premiums, amounting to 20 percent of the base pay of the workers who are absent, are paid to those workers who perform the work also of the absent workers, suitably, on schedule, and without charging overtime.

Division of the collective premium is being employed successfully at all enterprises of Slovchemie, in accordance with the principles that each enterprise adopts to give its workers optimal incentives for raising labor productivity. Besides utilizing the mentioned partial principles of the

Shchekino system, the enterprises are seeking further reserves in work organization, comprehensive rationalization, and in the revision and objectivization of the work norms and the introduction of new norms, through the education and training of their workers. The general directorate supports these efforts of the enterprises, particularly by applying the principle that it allows the organizations to retain the savings on manpower in the breakdowns of the labor and wage plan, provided the organizations accept the tasks contained in the plan and do not request a reduction of their tasks. The manpower saved in this manner is used for new capacities, particularly for environmental control, because the breakdowns of the plan from the supervising organs do not include breakdowns of the manpower required for compliancewith environmental regulations.

However, a basic problem remains that all the measures for which personal incentives are used can be realized only within the framework of the annual operational plans. Hence they lack a basic element of the Shchekino system, i.e., stability and long-term validity. Without this basic element, the efforts to implement the principles of the Shchekino system remain merely experiments.

Engr Antonin Krutil,
chief of the Department of Labor Economics
Slovchemie General Directorate, Bratislava

Wilhelm Pieck Chemical Works

Bratislava PRAVDA in Slovak 9 Nov 79 p 3

[Text] Our enterprise, the Wilhelm Pieck Chemical Works National Enterprise of Novaky, is a laureate of the Order of Labor and will be commemorating next year the 40th anniversary of its commissioning. At present it is one of the largest and decisive chemical enterprises in Central Slovakia Kraj, with a daily output exceeding 4.4 million korunas. We have been fulfilling the plan since the start of the current five-year plan period. At the end of the third year we had a lead of 9 days in plan fulfillment, and since then we have increased this lead to 11 days. We are achieving good results also in fulfilling the qualitative indicators set in the conditions of the comprehensive experiment to manage effectiveness and quality.

At first glance, then, we could be satisfied. On closer analysis of the achieved results, however, we find that our results could be even better, but only if the individual economic instruments were to enhance the more successful development of the enterprise, of the quality and effectiveness of labor, and--last but not least--a more pronounced development of the workers' initiative. Therefore we are seeking ways to influence on a long-term basis the overall technical, economic and social development of the enterprise. For this reason we welcomed the series of articles by the PRAVDA Brigade, through which we became acquainted with the principal ideas of the Shchekino experiment for the workers' long-term material self-interest in permanently raising labor productivity. Having carefully studied the main principles of this method, we are able to establish that some of its elements are encountered also in the practice of our enterprise. An obvious shortcoming, however, is the fact that the applied elements do not have a long-term and comprehensive effect, and thus they have been unable to produce for us such positive results as for the chemical workers of Shchekino.

Under the Sixth Five-Year Plan, merely through suitable rationalization measures, we have been able to achieve absoulte savings of 67 workers. An even more significant factor in raising labor productivity was the discontinuation of calcium carbide production at our detached shop in Handlova. With fewer workers we have been able not only to compensate for the 38 million koruna output of this shop, but also to achieve other year-to-year increases in output, and hence also in labor productivity.

Starting out from the permanent shortage of manpower, at the plastics and calcium carbide shops we are using experimentally a special premium fund from which a share of the wages saved is paid out to those workers who perform the work of the ones who are absent.

At the same time we are striving to broaden and upgrade as far as possible the vocational training of our people. In 1978, 1845 workers upgraded their skills through various forms of training within and outside the enterprise. This number includes 1193 workers who completed the mentioned forms of training, and 652 who are continuing in their training. Especially training within the enterprise conforms to an element of the Shchekino movement, because it includes also such directions of the training process that can be regarded as the expansion of skills by learning a second trade, which likewise contributes toward saving manpower. For example, the various courses for crane operators, lift-truck operators, loaders, welders, etc. In 1978, 260 blue-collar workers were enrolled in such courses. Today we have over 540 blue-collar workers with secondary or complete secondary vocational training. In the area of inventions and innovation proposals, society saved over 24 million korunas through their realization under the Sixth Five-Year Plan to date, and the gains from the results of the workers' initiative and of socialist competitions are likewise not insignificant.

Recently the All-Factory Committee of the CPCZ discussed these and other problems directly related to systematically improving the effectiveness and quality of work. Representatives of the editorial office of PRAVDA also were present. The conference revealed that the prerequisites for applying gradually and purposefully the principles of the Shchekino movement exist also at our enterprise. We have identified certain reserves in production, particularly in materials handling, maintenance and--last but not least--in the systematic improvement of work organization. However, the basic prerequisite for successfully introducing and gradually expanding the Shchekino method of raising the effectiveness and quality of work must be first of all the adaptation of the economic instruments to a long-term comprehensive system of incentives and labor plans.

In the chemical industry, moreover, we must bear in mind the desired safety and protection of the workers. This follows from the technology and the nature of production, and it decisevely influences the work environment and work hazards.

Therefore we have agreed that the gradual introduction and application of the Shchekino method can be realized on the basis of a thorough analysis of the present conditions and by elaborating this analysis into specific technical-organizational measures and internal norms. As a prerequisite for this, however, the workers must be thoroughly acquainted with the objectives and targets that are to be achieved, and sufficient room must be provided for the supervising economic and state organs.

The collective of chemical workers in Novaky, which comprises highly skilled, vocationally and politically mature blue-collar workers and technical-economic workers, is a guaranty that the demanding tasks of the state operational plan will be fulfilled. Therefore we are prepared to utilize also in our work the experience of the Soviet enterprises that operate according to the principles of the Shchekino method that provides long-term incentives for a permanent rise of labor productivity.

Signed: Ivan Majer, chairman of the All-Factory Committee of the CPCZ,
Ludovit Kmet, deputy director for cadre and personnel work,
Anton Sukenik, P-4 maintenance foreman, deputy chairman of the local trade-union committee.

1014
CSO: 2400

CZECHOSLOVAKIA

REASONS FOR DIFFERING FARM PRODUCTION LEVELS NOTED

Prague RUDE PRAVO in Czech 27 Nov 79 p 2

[Comment by Jaroslav Michalek: "Why Do the Results Differ?"]

[Text] One of the reserves which may markedly contribute toward much more distinctive achievements in our agriculture are the differing results in the management of agricultural enterprises operating under identical or at least similar conditions. This is no new revelation. Already the meeting of the CPCZ Central Committee in Paril 1972 emphatically stressed the need to lift the below-the-average enterprises to the level of the average ones, and the average enterprises to the level of the outstanding ones. Moreover, the 15th Congress of the party pointed out the disproportionately big differences between individual agricultural enterprises. The 13th meeting of the Central Committee this year in March in its decision explicitly ordered the administrative agricultural organs on all levels that they focus their attention on the effort to overcome any unjustifiable differences in results of production and in economic management of enterprises. As it appears, this weak point of our agriculture has, however, rather tough roots that are hard to eradicate. Many results in grain cultivation as well as in other areas of plant production this year indicate that the differing, unjustified yields are still continuing. Analogically, the differences in the achieved use value of farm animals in many places have not been successfully overcome. Among the scores of examples which could be offered as proof, let us take at least one from the district of Topolcany: the Mier [Peace] unified agricultural cooperative in Nitrianska Blatnica and the Svornost [Unity] unified agricultural cooperative in Salgovce are operating in approximately identical conditions, yet there are conspicuous differences in the use value of milch cows which they have achieved. While more than 3,700 liters of milk were obtained per each cow in Salgovce last year, the yield was less than 2,100 liters in Nitrianska Blatnica. At the same time, grain consumption per one liter was about the same in both enterprises.

Indisputably, the differences in the intensity of production between individual agricultural enterprises are reflected also in an uneven development of the financial results of the management. Its most convincing proof is evident from the analyses of differentiations in the intensity of agricultural production and of their causes, prepared by the Federal Bureau of Statistics. Although they indicate that in all areas of production in recent years the number of the below-average, average and above-average unified agricultural cooperatives shifted in the right direction as regards the intensity of their agricultural production, the result cannot be characterized as unquestionably positive. The relatively favorable development in balancing the differences appeared between the cooperatives in the potato-growing area, with approximately the same situation in the area growing only potatoes. On the other hand, however, the level declined in the corn-growing, mountainous, and partly also in the beet-growing areas, while in state farms the greatest differences in the intensity of agricultural production appeared in the mountainous area and the lest differences in the potato-growing area.

The most conspicuous differentiation in individual krajs appeared last year in the cooperatives in East Slovakia, particularly in those located in the mountainous area of that kraj. Major differences in the intensity of agricultural production were evident also in the cooperatives of Central Slovakia; although the differences between the cooperatives were slightly lower in the beet-growing areas of both krajs, the comparison with the level achieved by beet-growing areas in other krajs of the republic did not appear very favorable even here.

No wonder that the cooperatives in those krajs of Slovakia have been lagging behind the unified agricultural cooperatives of other krajs also when we compare the degree of differences in the cost of production. Moreover, as in nearly every area of production, the differences in the level of management here have become more conspicuous when compared with the results recorded in 1975.

This not only concerns considerable reserves for further achievements in the development of our agricultural production but also a serious problem affecting to a considerable degree the development of its profitableness, which may be evidenced for instance by the fact that last year almost 15 percent of the total number of our unified agricultural cooperatives all over our republic have been operating at a loss. With some exceptions (natural disasters, etc.), in the intensity of their production and total economic results, nearly all those enterprises failed to reach their inherent potential for their operations.

It cannot be said that the above-mentioned problem escaped the attention of the managing economic organs of our agriculture as well as of the party organs and organizations. Lately they have been focusing more intensively on questions concerning the level of management in agricultural enterprises within the areas of their activity. Thus, for example, in the Znojmo area the party's okres committee, evaluating the development in agricultural production over the past three years, noted that individual enterprises had failed to face external factors (most of all weather) equally well and efficiently. And when they probed even deeper, comparing the economic results of the cooperatives and farms, it became evident that in the lagging enterprises the qualification of their technical economic cadres was below the average level as well.

In simple terms, as the old folk wisdom says: Those who know--they know how! It has been confirmed that it is not enough to want to achieve good results in agriculture, but that it is imperative to know how to achieve them. This applies in particular to the managing workers, as confirmed quite explicitly in the conclusions of the above-mentioned analyses, which state that the level of managing and organizational operations was in most cases identified as the cause of the results in analytical comparisons of pairs of unified agricultural cooperatives operating in approximately identical natural conditions, but producing different outcome. Such analyses were made in 95 okreses.

Obviously, a great variety of other causes is behind the differing results and in many instances a very detailed analysis of all operations is required for this or that enterprise, but in most cases the conclusion has been reached that precisely the level of the managing and organizational work is the most essential cause. For that reason, attention must be focused particularly on the effort to reduce here the differences between agricultural enterprises; this continues to be one of the most vital tasks in the creation of prerequisites in our agriculture for a successful implementation of the decisions issued by the 15th Congress of our party.

9004
CSO: 2400

BRIEFS

MORE SVAZARM MEMBERS--According to Major General M. Vrba, chairman of the Czech Central Committee of Svazarm, the union for cooperation with the army, this year the number of basic Svazarm organizations in the Czech lands has increased by 197 so that there are now 6,195 basic Svazarm organizations in the Czech Socialist Republic with almost 540,000 members. [Prague LIDDVA DEMOKRACIE in Czech 1 Dec 79 p 3 AU]

SPANISH PARTY DELEGATION--A study delegation of the Spanish Workers Socialist Party arrived on 3 December in the CSSR of a study visit at the CPCZ Central Committee's invitation. It will study the CSSR's cooperation system and activities. [AU092025 Bratislava PRAVDA in Slovak 4 Dec 79 p 2 AU]

CSSR-ALGERIAN COOPERATION--Wladimir Berger, CSSR ambassador to Algeria, and Rabah Bitat, chairman of the Algerian People's Assembly, met on 2 December in Algeria to discuss the cooperation of supreme CSSR and Algerian legislative bodies. On the occasion Ambassador Berger presented R. Bitat the documents of the consultative meeting of top parliamentary representatives of the Warsaw Pact states, held on 16-17 October 1979 in Prague. [AU092025 Bratislava PRAVDA in Slovak 4 Dec 79 p 7 AU]

CSSR-FRG COOPERATION AGREEMENT--Yesterday O. Wolf von Amerongen, chairman of the East Committee of the FRG economy, arrived in Prague for a working visit to the CSSR. Shortly after his arrival by air he and L. Cerny, chairman of the Czechoslovak Chamber of Commerce and Industry, signed an agreement on cooperation between the two organizations. [Text] [Prague PRACE in Czech 10 Dec 79 p 2 AU]

ENVOY TO PRC--Z. Thelik, new CSSR ambassador to the PRC, has arrived in Beijing. [Text] [Prague LIDOVA DEMOKRACIE in Czech 8 Dec 79 p 2 AU]

DELEGATION'S RETURN FROM SYRIA--On 9 December a delegation of the Central Committee of Svazarm, the union for cooperation with the Army, led by its chairman, Lietuenant General V. Horacek, returned to Prague from Damascus. During the week-long visit to Syria, paid at the invitation of Ibrahim Ali, commander of the People's Army of the Syrian Arab Republic, the two sides established cooperation primarily in the sphere of paramilitary-technical activities and paramilitary training. [Bratislava PRAVDA in Slovak 10 Dec 79 p 2 AU]

DELEGATION RETURNS FROM CUBA--The study delegation of the CPCZ Central Committee Political-Organizational Department, headed by K. Kovar, deputy head of the department, returned on 10 December from Cuba, which it has visited at the invitation of the Cuban Communist Party Central Committee in order to exchange experience in the implementation of conclusions on political organizational work adopted by the two parties' congresses. In Cuba the delegation was also received by J. Ramon Machado Ventura. [AU121011 Bratislava PRAVDA in Slovak 11 Dec 79 p 2 AU]

SPANISH DELEGATION DEPARTS--The study delegation of the Spanish Workers Socialist Party, which was visiting the CSSR at the CPCZ Central Committee's invitation, departed on 10 December from Prague. The delegation acquainted itself with the CSSR's cooperation system and visited cooperative farms, production and consumer cooperatives. [AU121011 Bratislava PRAVDA in Slovak 11 Dec 79 p 2 AU]

TRADE PROTOCOL WITH INDIA--In 1980 the turnover of Czechoslovak-Indian trade is to increase more than 8 percent. That follows from the protocol on the exchange of goods between the CSSR and India for next year, which has been signed in Delhi, within the framework of the official visit of Andreu Barcak, CSSR minister of foreign trade, to India. The CSSR will import iron ore, cotton yarn, jute fabrics, coffee, tea as well as textile and leather garments and tires. The wide assortment of industrial products imported from India will include, among other things, varnishing booths, shock absorbers, motorcycle engines and other engineering products. The Czechoslovak exports to India next year will consist mainly of the traditional engineering products and production components supplied within the framework of mutual technological cooperation and--among other things--also of special types of steel. [Text] [Prague RUDE PRAVO in Czech 8 Dec 79 p 7 AU]

LAGGING ANIMAL PRODUCTION--According to D. Vanek, deputy minister of agriculture and food in the Czech Socialist Republic, the dynamics of animal production development does not correspond to the planned indexes. Toward the end of 1979 the republic will have a deficit of 25,000 cows. Due to bad weather and insufficient fodder reserves, the number of cattle and, in certain regions, the yields are decreasing. At present the milk production plan fulfillment shows a deficit of 133 million liters. The daily weight increments in cattle for slaughter amount to about 60 grams less than last year and the carcass weight is also decreasing, as is the number of calves born. The losses due to deaths and enforced slaughter have increased two percent. [Prague ZEMEDELSKE NOVINY in Czech 5 Dec 79 p 1 AU]

CHEMICAL INDUSTRY CONFERENCE--In Marianske Lazne on 4 December, Bohumil Urban, Czech minister of industry, opened the 10th all-state Chekoma 79 conference on economy and the management of the chemical industry. The main theme of the 4-day conference attended by prominent experts in the field from the CSSR and other CEMA countries is raising the chemical industry's effectiveness. [Prague RUDE PRAVO in Czech 5 Dec 79 p 2 AU]

NEW DIESEL OIL COUPONS--The Benzina's subsidiary Chemopetrol, together with the Benzinol National Enterprise, advise all private consumers of motor diesel oil (formerly heating oil bencalor) that they have begun selling new coupons [obderne poukazky] for motor diesel oil. The coupons are being sold by the cashiers of the outlets of the Benzina subsidiaries and of the Benzinol National Enterprise, and at the counters of selected post offices. Temporarily, until 31 January 1980, motor diesel oil can still be bought for cash at gasoline stations, or with the new coupons. After that date, motor diesel oil at gasoline stations can be acquired only with coupons. This measure also concerns all other private motorists, that is, all those using motor diesel oil as fuel for vehicles with spark-ignition (diesel) engines, or for other purposes. [Report signed (C)] [Text] [AU131042 Bratislava PRAVDA in Slovak 12 Dec 79 p 2 AU]

DELEGATION TO PRC--Beining--A Czechoslovak government delegation, led by Deputy Minister for Technical Development and Investments Antonin Mrazek, arrived here on Thursday to attend the 21st session of the Czechoslovak-Chinese Mixed Commission for Scientific and Technical Cooperation. [Text] [LD090809 Prague CTK in English 1705 GMT 6 Dec 79 LD]

TRADE WITH INDIA--New Delhi (Ceteka correspondent)--The Czechoslovak-Indian trade turnover is to increase by more than eight percent in 1980, under a trade protocol signed here on Friday during Czechoslovak Foreign Trade Minister Andrej Barcak's current visit to India. The protocol provides for Czechoslovak imports from India of iron ore, cotton yarn, jute cloth, coffee, tea, textiles, leather goods and tyres, shock absorbers, engines for motorcycles and other engineering industry products. Czechoslovak exports to India will include mainly engineering industry products, special steels and oil pipes. [Text] [LD090809 Prague CTK in English 1133 GMT 7 Dec 79 LD]

ECUADOR ENVOY DEPARTURE--On 5 December, Alois Indra, chairman of the CSSR Federal Assembly, received Alfredo Donoso, the ambassador of the Republic of Ecuador to the CSSR, in connection with the latter's end of tour in Czechoslovakia. [AU120857 Prague RUDE PRAVO in Czech 6 Dec 79 p 2 AU]

GAS PRODUCTION PLAN EXCEEDED--In the first 11 months of this year, the Nafta Enterprise of Gbely exceeded the planned production of natural gas by 50 million cubic meters, and stored 700 million cubic meters of gas in the underground reservoir at Laba. [Prague RUDE PRAVO in Czech 10 Dec 79 p 2 AU]

CSO: 2400

GERMAN DEMOCRATIC REPUBLIC

GDR-JAPAN ECONOMIC COMMITTEE MEETING REPORTED

LD301435 East Berlin ADN International Service in German 1222 GMT 30 Nov 79 LD

[Text] Tokyo--The 10th meeting of the GDR-Japan economic committees ended in Tokyo on Friday with the signing of a joint work program for the coming year. The document was signed by Dr Gerhard Beil, member of the GDR Council of Ministers, and by Yoshihiro Inayama, chairman of the board of the Nippon Steel Corporation.

The work program is aimed at an above-average development of trade which is to do greater justice to the great economic and scientific-technological potentials of both industrial states. It was agreed that the next meeting of the economic committees would be convened during the 1981 Leipzig Spring Fair. The Hotel Merkur, which is being built by Japanese firms in Leipzig, will be completed by that time.

On Friday Dr Beil had a meeting with Yoshitake Sasaki, minister for international trade and industry. Beil submitted to the meeting proposals for further stable, consistent and long-term trade and economic cooperation.

There is special interest in Japan in machinetools, and products from the precision tool, optical and chemical industries. During the GDR delegation's stay, agreements on mutual trade for 1981 to 1985 were reached with five large firms.

During its Japan visit the delegation acquainted itself in Nara and Kyoto with the research and production programs of the Sharp and Mitsubishi enterprises. Dr Beil had talks in Osaka with Hosai Nyuga, president of the Chamber of Industry for Western Japan (Kankeiren) and chairman of the board of Sumitomo Metal. Proceeding from the fact that the growth rates in the trade between the GDR and Japan has developed at an above average rate, especially in recent years, and that both sides could in this process gather good experiences, the next steps for 1980 and 1981 were discussed.

CSO: 2300

GERMAN DEMOCRATIC REPUBLIC

POLITICAL INTERFERENCE IN INDUSTRIAL MANAGEMENT ASSESSED

Duesseldorf WIRTSCHAFTSWOCHE in German Vol 33 No 47, 19 Nov 79 pp 84,86,89

[Analysis by Dr Hans-Juergen Klemmer, former student at East Berlin School of Economics and assistant at its Institute for Data Processing; worked subsequently in a large East Berlin enterprise for 5 years until summer 1979 when granted permission to emigrate to FRG: "GDR Economy: The Plan Is Law"]

> [Text] Federal German managers are hard put to it to understand the external pressures and problems which managers in GDR enterprises must handle. Dr Hans-Juergen Klemmer describes how they succeed all the same in fulfilling the set plans.

Of course "state owned" and "private capitalist" enterprises have a lot in common, because both are engaged in production. The management structure, for example, is almost identical and follows the principle of organizational charts. Also noted in the GDR economy for some years past has been a greater emphasis on concentration and specialization. Currently mergers of several enterprises into major combines with 10,000-50,000 employees occur fairly regularly.

It is entirely the fault of the political system that GDR state enterprises nevertheless have such inferior technical equipment and poor productivity. The system compels managers at all levels to subordinate their decisions to the political doctrines of the party and government apparatus.

On one occasion an Erfurt industrial official complained to his intimates that "with us politics constantly rape economics!" The rape proceeds in accordance with the Leninist principle of the primacy of politics vis-a-vis economics: The management of the operational and economic reproduction process must respond completely to the implementation of the political goals of the party of the working class and the socialist government.

This applies even to foreign trade. For Erhard Wagner, marketing director of the Industrial Works Rauenstein/Thueringen VEB, for example, negotiations on the world market always represent the "class conflict between socialism and capitalism."

Consequently even the works director who, in principle, is responsible for the entire operation of the plant, is subject to the influence of party political or governmental constraints. According to Rudi Gehrisch and Willi Hoffmann, members of the Central Institute for Socialist Management at the SED Central Committee, it is a "definite tenet of Marxism-Leninism that management issues are issues involving the exercise of power by the working class and its allies." Managers obtain "their social assignment from the hands of the working class and are accountable to it" (WIRTSCHAFTSWISSENSCHAFT No 2/1979).

This constantly invoked "power of the working class," actually the power of a centrally directed party apparatus, is exercised by a similarly centrally organized government apparatus. In other words it is the party which ultimately decides what is to be produced.

This is done by way of plan quotas which are assigned to enterprises by the government apparatus--State Planning Commission, industrial ministries, VVB's [associations of state enterprises]. In addition to expenditure limiting index figures (such as the permissible labor force, the volume of construction services for investments and the volume of possible imports),these quotas include efficiency index figures (such as productivity) and performance indices. The latter include, among others, "industrial goods production" (which, as I shall demonstrate later, is subject to some dispute), unit figures of selected and (in economic terms) crucial products, the volume of production for "popular demand" and exports as well as the net profit to be earned and the amount of the tax to be paid to the government.

Factory management is confronted with the problem that the index figures for expenditure and performance frequently fail to match. The plan, for example may call for higher output rates but either makes available only part of the needed resources--construction services, machines and manpower--, or fails to do so altogether. Still, the plan is law. Management must fulfill it at any price.

Consequently minor unauthorized investments--so-called black investments--are carried out after all, financed from the relatively obscure repair fund or the performance fund (introduced a few years ago). The performance fund, especially, fed by earlier excess plan fulfillments, makes it possible to implement the new plan by, for example, extra-plan rationalization or overtime.

As enterprise operations involving the performance fund are increasingly uncontrollable, economists call for its "greater consideration in material planning and balancing" (WIRTSCHAFTSWISSENSCHAFT No 1/1979), to make supervision easier. A vicious circle.

Many GDR factories meet some of the excessive quotas by adroit shifts in the assortment: They produce items which, though requiring the same man hours, result in a higher value due to the use of more expensive materials in their manufacture. That is the reason why economists tend to dispute the plan quota "industrial goods production," because it "encourages the economic interest of enterprises in material intensive production" (WIRTSCHAFTSWISSENSCHAFT No 5/1979), and this represents a serious burden on the GDR which is deficient in raw materials. Moreover, this quota favors the "formal expansion of cooperation for the purpose of raising the value shown." Translated from code this means that semi-finished and finished goods are sold and bought back between enterprises--sometimes more than once--, with the sole purpose of upping the plan fulfillment quota goods production.

Should plan fulfillment still be threatened, brigades are "persuaded" to commit themselves to extra shifts or some administrative employees transferred to production in order to render "socialist aid."

Most works directors are therefore always able to fulfill the plans. Year by year they "confirm" to government and party organs that which is proclaimed on many posters: "Our approach is correct!"

It is evident that, in view of these circumstances, GDR managers are primarily concerned to provide favorable conditions for plan fulfillment. This results in a wrangle for government subsidies for investments and additional manpower. Furthermore, department and factory managers are intent on obtaining performance cushions at all levels and do this by concealing available capacities. That in turn is made possible by the often totally disorganized system of standards, the lack of up-to-date basic data on the operations plan card index and the material, capital equipment and product indices. The introduction of computers has served merely to reveal this disorganization but has done little to improve matters.

Given the rigid orientation to an output of goods set in terms of value, the enterprises are hardly able to concentrate on profitability and earnings. Yields are sacrificed to plan fulfillment. Not that the enterprises have a choice when we consider the prevalence of fixed price systems, government influence on supply contracts and the choice of customers, the lack of decisionmaking scope in the use of profits and the inadequate system of cost accounting.

Cost accounting is a particularly weakness in the daily life of GDR enterprises. Most of them have no means accurately to cost the various products, nor do the production departments know how to exercise detailed and steady cost control. Incidentally, brigade leaders, foremen and shop clerks are virtually forced to manipulate vouchers or to complete them without details, because production plans must be met even if personnel is absent due to sickness or on training courses, material is lacking, machines must be discarded due to obsolescence, production shifted at short notice or short-term export orders filled.

At times foremen and production managers, even production directors, actually take refuge behind this hectic operational plan fulfillment, because the fulfillment of a threatened but ultimately saved plan earns more kudos from the economic officials than does the accurate ascertainment of primary data.

Rarely is the cost accounting department called upon to provide a detailed breakdown of costs, with the result that it tends to be the usual practice to substitute cost administration for cost accounting. The department is largely preoccupied with compiling overall monthly reports for the perusal by central economy managing organs, especially the Central State Administration for Statistics, and to deliver these punctually and accurate to the last pfennig.

Adverse effects are also exerted on profitability considerations by the fact that every enterprise is compelled to hand over to the government part of all profits earned. The amount of this government share is fixed by rather obscure and constantly changing criteria.

Depending on plan fulfillment the remainder of the profit is allocated to the enterprise premium fund to finance the 13th monthly salary and special bonuses, the performance fund and the fund earmarked to finance small investments. Yet even these small investments cannot be carried out freely; they depend on the availability of building materials and equipment as well as the assignment of construction firms by local or superior economic organs. As a result everything is balanced several times over, circumnavigates hectic amendment rounds and, in the end, after incorporation in the plan due to the personal initiative or good contacts of the investment department's manager, gets carried out though in a somewhat different shape than originally envisioned.

If the enterprise is planning some major investment, the resources needed are made available only upon presentation of elaborate evidence of the economic necessity of the measure and repeated consultations at higher level. For example any investment with a total value exceeding M10 million must be approved by the industrial minister, and even an investment valued at only M100,000 is subject to the approval of the kreis councils.

Western managers usually fail to comprehend the significance of the influence the SED exercises on the directors of state enterprises. No important decision is made in a socialist enterprise without the party--let alone against it. That is guaranteed both from the institutional and personnel aspect and described in the respective laws as "social cooperation and shared responsibility by the political mass organizations."

The SED is represented in every state and cooperative enterprise. The extent of party organization is estimated at 15-25 percent. Analogous to the enterprise structure basic SED enterprise organizations are subdivided into departmental party organizations (APO's; as a rule they include a specialized directorate or production section) and party groups (for sections or groups headed by a foreman) with an APO secretary and APO leadership or party group organizer and deputy respectively. The enterprise party secretary heads the basic organization. He is assisted by several deputies, a political staff and, as honorary executive body, the central party leadership.

The party leadership of the enterprise maintains direct contacts with the SED kreis leadership. The enterprise party secretary is subordinated to the first secretary of the SED kreis leadership and, like all full-time party officials in the enterprise, paid by the party. In addition close cooperation prevails with the party leadership of the superior economic organ (industrial ministry or VVB).

All important economic and personnel issues are discussed and a preliminary decision is arrived at by the enterprise party management, whether they concern major investments, rationalization projects, export obligations, the discharge or hiring of directors and even the appointment of the enterprise labor union chairman. The enterprise party secretary also has the right to audit all directors meetings. The same applies to the APO secretaries in the specialized directorates and to party group organizers in the sections. The intention is "constantly to instruct and supervise managers as well as the officials of the social mass organizations, enabling them to discharge their politico-ideological assignments in the enterprise," says the textbook "Sozialistische Betriebswirtschaft" [Socialist Management], published by DIE WIRTSCHAFT, East Berlin, GDR.

In an enterprise employing about 5,000, the enterprise party secretary has 10-15 full-time staff working for him. Even part-time party officials use increasingly large chunks of their working hours for the growing volume of party work (10-50 percent), an obvious handicap to the production flow.

Yet no enterprise manager would dare rebel. If he did, he would be accused of neglecting the importance of ideological work. That is a very serious reproach, and comrade manager would most certainly be hauled over the coals by his party group.

The majority of management cadres in GDR enterprises are SED members. For appointment to a managerial job party membership is a most important qualification, though admittedly less so in technical than administrative sections, because there is a lack of suitable party members among technicians.

Refusal to perform is on the rise and occurs more frequently among the technical intelligentsia and skilled workers especially. Jobs and incomes are secure. Any additional performance or responsibility primarily involves annoyances, overtime and political work. Extra plan initiatives have a way of disadvantaging the initiator. Rudolf Bahro spoke of the "change from the intelligentsia to bureaucracy." In the case of the younger specialists in the enterprises it would be more correct to speak of a change from initiative to apathy.

The "young cadres" know all too well that, once in the party, they are subject to strict discipline. They must submit in two ways: On the job to their superiors, in political matters to the party secretary. Many of the older managers are unconscious of this dual dependence, because the GDR has never had a clear separation of job and politics, and because every employee is used to every decision having to be politically approved. Enterprise directors and party secretaries appreciate their mutual dependence, because the enterprise is their assignment and field of action.

There are some individual enterprise directors who, due to their strong personalities and excellent contacts to the central party apparatus, dominate their enterprises completely and demote the party secretary to second-in-command in charge of ideological issues. Such exceptions, though, are met only in very large combines, and in these cases the combine director is usually a member of the SED Central Committee.

It is quite obvious in view of this political burden that a socialist manager has little time to deal intensively and with full commitment with the administrative matters he should control; although he holds overall responsibility, he is constantly subject to external pressures. Federal German managers simply cannot understand the stress on their colleagues in the other part of Germany, which results from politico-ideological compulsions and deflects them from their real job. A single ideological misstep may lose them the job. On the other hand a socialist manager can well afford several wrong managerial decisions without being seriously taken to account. That also serves to explain many deficiencies in GDR enterprises.

11698
CSO: 2300

GREATER PRODUCTIVITY USING LESS ENERGY SEEN POSSIBLE

East Berlin NEUES DEUTSCHLAND in German 24-25 Nov 79 p 3

[Article by Dieter Brueckner: "With Less Energy More Products--Magic Formula or Working Principle? Chemical Workers Will Increase Production in 1980 by 7.6 Percent, But Will Use 3.7 Percent Less Energy--How Is That Possible? A Letter to Erich Honecker by the Workers at Leuna Provides the Answer"]

[Text] On the face of it the whole proposition sounds startling if not unbelievable. How can a company, whose production has been based for years on the same technological principles, chemical formulas and physical laws, expect to suddenly reduce its energy consumption by a great margin? How can considerable hidden reserves be found in large-scale chemical manufacturing processes and reactions which are almost automatic or at least automated to a large extent?

A lot of question marks. But the workers at the Leuna Works had the courage to set for themselves the goal of "attaining a volume of production exceeding that of 1979 by 7.6 percent with a 3.7 percent saving of energy representing an absolute saving of 4,000 tons of fuel a year." This equals an annual supply of coal briquettes needed to supply 100,000 households.

The above is contained in a letter which the Walter Ulbricht Leuna Works collective upon careful study sent to the 10th Central Committee Plenum of our party.

This only confirms the reputation which Leuna workers have enjoyed for so long, namely that they act responsibly in matters concerning the national economy on the basis of a thorough understanding of economic relationships.

"We all profit from the reduced production costs and the increased supply of goods whether we produce the same volume of products with less energy or a greater volume of products with the same amount of energy because thereby we increase the national product and raise the wellbeing of the population." This is what the letter says, it is that simple. Or is it? Because economic thinking and action do not come automatically, not even at the Leuna Works. Conviction and a feeling of responsibility do not derive from chemical equations but from dissemination of truth, explanations of political and economic developmental processes, persuasive arguments and the overcoming of false notions.

On Balances, Costs and Percentage Weights

Everybody knows that our state makes a great effort and spends much money in the endeavor to build up our energy base. To that end the mining of brown coal, the most important energy resource in the GDR, has doubled since the founding of the republic. Our mining output of more than 250 million tons of brown coal a year is more than 25 percent of total world production of brown coal. Electric power production rose from 17,300 KWh in 1949 to 96,000 KWh in 1978 and the per capita production of our republic is highest among all CEMA countries and exceeds that of Japan, Great Britain, France, Belgium and of other countries.

At the same time we do not overlook the fact that, for example, the geological conditions for the mining of brown coal are becoming progressively more difficult and require increasing expenditures, which is further complicated by the steady increase in price also on world markets. In capitalist markets prices for crude oil and gasoline rose from 1971 to 1979 more than sevenfold and for hard coal more than twofold. Since the opening of new resources in CEMA countries also entails increased expenditures we are forced to pay more also for these imports. In view of these developments greater credibility is attributed to economic calculations demonstrating that means spent on energy-related rationalization measures are recovered 1.5 to 2 years, while repayment of investments into new power production capacities frequently takes 15 years and even longer.

A Program Yielding Double Savings

These facts also lend credibility to the proposition that in the national economy frugality is a rational postulate and discredit arguments about "exhausted possibilities," "optimal size of production facilities," and the "impossibility of changing processes which have been used for years."

And the results? Following the impressive enumeration of savings achieved this year the letter sets the following objectives for the next year:

--Reduction of power consumption by 6 percent;

--Reduction of brown coal consumption by 6 percent, of heating oil by 2 percent, of low-temperature coke from brown coal by 3 percent;

--Reduction of gasoline consumption by 8 percent and of Diesel fuel by 3 percent.

These figures may not mean much to the uninformed reader. But at issue here are scores of gigawatt hours of power, hundreds of tons of coal and oil and many million marks in profit. The great importance of every percentage point in savings derives from the fact that the Walter Ulbricht Leuna Works is one of the largest enterprises in the country and at the same time one of the largest consumers of fuel and power, which in this case accounts for 25 percent of all production costs. This calculation can be carried further. On the scale of the entire national economy a 1 percent saving in brown coal consumption represents 2.5 million tons, in the case of crude oil 200,000 tons, in the case of power 960 GWh. This raises an interesting question: how does a large energy consumer turn into an exemplary energy saver?

First of all, at the Leuna Works as in other enterprises the belief prevails that the preparation of new power plants offers the best possibilities for improving energy efficiency. But all available experience demonstrates equally emphatically that many opportunities for preventing energy losses of all kinds exist also in the other plants. And the letter addressed by the Leuna workers to the Central Committee refers specifically to the tapping of these reserves. Let us examine two of the most important points made:

The first point: process analyses. This initiative of the Leuna Works yielded in past years quick results and was as a consequence adopted fairly rapidly by many other industrial sectors. Now the workers from Leuna write: "The broad application of this work method comprising the systematic examination of the interrelationship of economic aspects of energy production, consumption and public awareness of the problem together with power plant technology constitutes for the future also the key to the implementation of the exacting objectives in the field of energy use."

The second point: rationalization. Currently an energy management rationalization program for the period from 1980 till 1985 is being prepared by the combine. It is designed to "at least double the hitherto achieved results."

No Thinking in Very Small Terms With Respect to Rationalization

Leuna workers are not satisfied with thinking "small." The program provides, for example, for the application of microelectronics in thermal treatment processes. All possibilities for improving energy efficiency by technical and technological changes indicated by ongoing process analyses are to be implemented with "utmost speed." The entire monitoring technology will be revamped.

The important message which careful reading of the Leuna letter imparts is: the prerequisite for rational energy use and the economical management of available energy resources and fuels are convincing political and ideological education, scientific organization of production, far-sighted planning and consistent leadership. According to Erich Mueller, general manager of the Leuna Works "concrete energy saving economic tasks and objectives which have to be accounted for form part of long-term projections and research concepts, five-year and annual plans and even of competition pledges made by collectives."

What Even Shipbuilders Can Learn From Leuna

All would be well if it were so everywhere. But in our republic even within the chemical industry obvious differences exist in the efforts made to save energy. How else can we explain the fact that the Leuna Works, producing around 8 percent of all industrial goods, have achieved by rationalization an almost 25 percent saving in energy? They can serve as an example to others reminding them to speed up their efforts.

Another example from a completely different sector, our shipbuilding industry, also testifies to the existence of management deficiency in this area. While the shipyard slip-ways can hardly be compared with chemical enterprises, still, the fact that the Stralsund Peoples Shipyards had to interrupt power during the morning shift to prevent an overdraft of the assigned power consumption quota while the second and third shifts have not even exhausted their power allocation puts in question the quality of leadership and production organization and raises questions of economic accountability. And the Leuna Works may well serve as an example of "how to create an atmosphere in which every individual consciously and actively cooperates in socialist competition for the rational use of energy and the prevention of its waste."

That too is a quotation from the above letter revealing also what contributes to such a productive atmosphere: the inclusion of energy-saving tasks as priorities in the science and technology plan, the planning of innovatory activities and cost ceilings all the way down to the work site, exchange of information by economic authorities, public acknowledgement of outstanding results, proper material incentives and public control by honorary energy activs.... The Leuna Works has come up with many ideas which demonstrate that no miracle formula is needed to increase production and do so with less energy.

8664
CSO: 2300

GERMAN DEMOCRATIC REPUBLIC

SUBSTITUTE FOR BROWN COAL USED SUCCESSFULLY

Schwerin SCHWERINER VOLKSZEITUNG in German 15 Nov 79 p 4

[Article by Ingeburg Gruening: "In Sternberg Things Go Well With Fine Coal, While Elsewhere in the Bezirk the Idea Has Not Yet Caught On"]

[Text] Replacing brown coal with cheap fine hard coal offers one possibility of using energy more rationally in the GDR. Of importance is that while the caloric value of fine hard coal can be as high as 6,200 kilo calories per kilogram brown coal briquettes have a value of up to 4,650 kilo calories per kilogram. But not all enterprises equipped for burning fine hard coal do so. The SCHWERINER VOLKSZEITUNG reports on a visit to the Finkenkamp thermal station in Sternberg, where the new fuel is being used to good effect.

At the Finkenkamp thermal station in the outskirts of Sternberg the stokers have now been using fine hard coal over a period of a few months to heat the adjacent new settlement, clinic, DRK [German Red Cross] station, school and nursery. This fuel, which has not been used before, is a byproduct in the mining of hard coal in the Polish Peoples Republic. The caloric value is good. The results are convincing, the use of the fine hard coal is saving a ton of brown coal briquettes a day, replacing 15 percent of the hitherto used quantity of briquettes. But the expenditure of labor is greater than in using briquettes as fuel.

"At first we found it difficult to accept the new fuel," says stoker Guenter Fiedler. "Experienced stokers are used to simply throw brown coal briquettes into the furnace and be done with it. Fine hard coal must be handled differently. It leaves a greater amount of slag and ashes because the hard coal crumbles are smaller than sugar cubes. Experience must be acquired first on how best to mix fine hard coal with other fuels. One has to look through the visor more frequently and use the poker bar occasionally to restore the draft in the furnace."—"Yet," continues stoker Guenter Baekker, "we've tried it and found the right solution in the mix of fine hard coal with crude brown coal and brown coal briquettes."

The Finkenkamp stokers intend to find an even more economical fuel mix by omitting crude brown coal and burning only fine hard coal with brown coal briquettes which is even cheaper. Besides: detailed instructions for the use of fine hard coal were submitted by the worker group of the same name to the bezirk energy commission and these are being distributed to enterprises able to burn fine hard coal.

"Just talking about energy conservation is not enough in my opinion, one must also do something about it" says Guenter Fiedler, explaining the reason motivating the Sternberg stokers. "Conditions are becoming increasingly complicated in mining crude brown coal," adds chief stoker Walter Stolle "while its consumption is on the increase. And we do not intend to let the situation get out of hand."

The people at the Finkenkamp thermal station have many other good ideas on how to use fuels as economically as possible.

The amount of heat provided is strictly governed by the weather and not by instinct. Outside temperature is measured every three hours and entered in a control ledger. At Finkenkamp they not only have tarpaulins, but they also use them to protect the coal from rain. Random measurements are taken every 2 weeks in the houses of the new residential district to comply with prescribed temperatures.

But elsewhere the experience with fine hard coal is not as favorable as at Finkenkamp. The new fuel is being introduced only hesitant in places where it could be used and by far not everywhere. The work group "Fine Hard Coal" estimates that this involves 200 enterprises in our bezirk. According to information received from the manager of the VEB Kohlehandel Schwerin Bezirk Enterprises (to name only a few) reported the following "usage" of fine bituminous coal: VEG (state farm) Warnitz: supply on hand--54 tons, consumption--nil; Socialist Wholesale Textile Distributors Grabow: supply on hand: 13 tons, consumption--nil; VEB (enterprise) Housing Management Boizenburg: supply on hand--6 tons, consumption--nil; POS Fritz Reuter Kritzkow: supply on hand--10 tons, consumption: nil.

Such hesitancy is hard to understand considering the objective necessity to use energy rationally. According to an assessment made by Comrade Heinz Ziegner at the October meeting of the bezirk leadership energy conservation is a problem which may be well-known but is still being acted on only with varying degrees of urgency. A change of heart is needed in many places. In specific instances required measures should be taken jointly and quickly by the respective bezirk leaders, the special work group of the bezirk energy commission and also by the VEB Kohlehandel. Walter Stolle, chief stoker from Sternberg, has also declared his readiness to share with others the experience gained by his collective.

8664
CSO: 2300

OFFICER INTERVIEWED ON CIVIL DEFENSE ACTIVITY

Budapest NEPHADSEREG in Hungarian 17 Nov 79 p 3

[Interview with Colonel Imre Perger, national civil defense commander]

[Text] [Question] In addition to the civil defense exercises at various levels, we have been reading more and more recently and seeing films on the possible tasks of the population in a war catastrophe situation. What is the need for this?

[Answer] It is well known that as a result of the constant effort by the socialist countries and progressive forces, the peace situation is being continously strengthened, and the power relations are changing in favor of the progressive forces. It is also well known that despite the process of detente the world political situation is extremely contradictory. Imperialism has not given up its aggressive goals and is doing all it can to contain the progressive forces. The maintenance of peace, the constructive work and further development of the socialist world system, including Hungary, is assured basically by the coordinated policy of the countries in the Warsaw Pack and the preparedness of their armed forces at a high level. Therefore, it is a task of vital importance that we constantly strengthen our defense capability. It would be one of the characteristics of war in the future--as a consequence of the enourmously accumulated volume of destructive weapons, their unlimited radius of action, and annihilating power--that the difference between the frong lines and the rear areas will disappear. The politcal and economic centers, facilities, settlements and transportation junctures situated in the rear areas of the front lines would be as exposed to the effects of enemy attack as the troops fighting on the front.

As a consequence of the use of weapons of mass destruction, extremely complicated circumstances will come into being in the rear areas: the destruction of inhabited areas, factories, plants and transportation lines, extensive areas subjected to radiation pollution, mass fires, many dead and injured. It would be under conditions like this that we would have to solve problems of how to rescue people's lives, care for the injured, continue production, supply in a manifold way the troops fighting on the fronts and the population, successfully pursue the armed struggle, and assure the conditions of survival.

Statistics for past wars show that civilian casualties are constantly increasing as compared to fighters on the front. While in World War I civilian casualties were only one-tenth of total casualties, it was one-half in World War II and 80 percent in the Korean War. In a future world war--if we do not succeed in preventing the imperialists from starting one--the effects and the consequences in the rear of the front lines will exceed any hitherto known and imagined dimensions. Therefore it was necessary to continue developing air protection for local defense into a defense system extending over the whole country--into civilian defense--in the framework of which we must prepare the country's entire population, its economy, leadership and area to avert the effects of the enemies' blows, to reduce the consequences thereof, and to survive.

Nowadays, civilian defense--as an organic part of national defense--has become a system of defense realized with social and individual force through measures taken in the interest of defending life and property and cooperation in averting elemental calamities, industrial and natural catastrophes, and thus it has created a solid background to the fighting forces. One of the most important tasks of civil defense is to prepare workers engaged in a work relation and the broad layers of the population for a possible war or catastrophe. Our exercises serve this goal.

[Question] According to what kind of system of civil defense are preparations proceeding?

[Answer] The civil defense preparation of the citizens--workers and population--is a manifold and complex task. Everyone must be taught self-preservation, the most important rules of defense and behavior, first aid, and the use of individual protective equipment. In addition, those assigned to the so-called specialized units of the civil defense groups must master the technical problems of collective defense. These include, for example, technical rescue work; firefighting; chemical radiological and biological detection and decontamination; resettlement; production and supply under war conditions; and the tasks, principles and methods of protecting drinking water and food. The basic principle of preparation is that everyone must be taught whatever--as a consequence of his role in production and his assignment in civil defense--is necessary in case of war for the successful solution of individual and collective defense tasks. Preparedness is organized on area and branch principles. It is on the basis of various requirements, subjects and methods that we prepare the population, the plant workers, the learning youth, those assigned to self-defense and special services organizations, or leading plant and state administrative organs. As in the case of army preparation, training is conducted on the principle of progression. It begins with individual basic training, followed by specialized training or group training, where we can exercise and weld together the civil defense organizations in units according to constituents (squad, platoon, station or plant, village and so forth).

The training peak--as in the army--occurs with the large exercises, and the city, district and megye civil defense actions. In these exercises, besides the several thousand residents and factory workers, the self-defense and specialized service organization of civil defense participate, as well as the leading state administrative, economic and transportation organs, and the armed forces and bodies including the army, the police, the workers' guard and the firefighters. In the theoretical guidance of the tasks an important role is played in the actions of the organizations and the population by the local organizations of the Hungarian Socialist Workers' Party and by mass organizations. The main goal of these system exercises is to practice the coordinated execution of the tasks, to perfect leadership and cooperation, and to supervise the results of the preparation.

[Question] Broad layers of the population participate in the exercises that are conducted on chiefly free Saturdays and Sundays. How do people accept this, to what extent do they feel they are participants in exercises which are important and serve the interests of everyone?

[Answer] On every occasion, purposeful and broad scale party political preparation precedes the exercises conducted with great technical understanding and expert organization. Thus, for example, careful preparatory work preceded the exercises held in Szolnok megy on 8-9 September 1979 which included almost 20,000 people and a thousand technical means. In course of the preparation--in close cooperation with the megye party organs and the mass organizations--we visited in the actual sense of the word every participating resident, explained the goals of the exercise, its place and role in the system of civil defense preparation, and also spoke of the importance of the work of individual citizens. This well-considered, detailed and preparatory work built on human understanding and citizen's sense of obligation attained its goal in a far-reaching manner. Every class of participants gave witness to a citizens' discipline built on a high degree of self-consciousness and expressed the confidence of our people in our party's and government's policy. The population and the civil defense of Szolnok megye performed its task with a well-considered sense of great responsibility and techinical understanding.

Our experiences in other megyes conducting exercises are similar to those in Szolnok. As evidence, let me present one piece of information. From the beginning of these system exercises in 1977 more than 10,000 persons participated with many thousands of vehicles and technical equipment in the exercises without a single irregular incident or without incident.

[Question] Comrade Colonel, how do you judge the cooperation and relations of the armed forces and bodies with civil defense?

[Answer] One of the important pillars of solidarity in the rear areas is a well-prepared civil defense capable of operating also under exceptional conditions, a capability which nowadays has developed into a strategical factor. The fulfillment of the proliferating tasks of civil defense requires close cooperation with the armed forces and bodies.

A resolution of the Council of Ministers states: "Basically, civil defense--within a national defense system--must be organized and further developed in the framework of the assigned activity of civil, armed and police organs, or in harmony with them." According to this resolution the organization and direction of civil defense is linked organically both to the system of national defense and state administration.

The leading functional and branch organs of the Ministry of Defense extend, in accordance with the government resolution, effective assistance to the organization and realization of civil defense tasks, and provide cadre planning, organizing and executing civil defense tasks, the central and area guiding organs, units of the armed forces and bodies of our republic, of the law and order organs--the Hungarian Army, the police, the workers' guard, the border guard, and the firefighters--participate actively. In recent years, the substantive level of our cooperation has developed significantly both in the area of planning and organization and in execution.

Thus the combined exercises, including those of the district, city and megye, of civil defense extend great assistance to learning one another's tasks, the clarification of the modes of cooperation, and the deepening of our armed brotherhood. Our soldiers, police, workers' guards and firefighters could become convinced that civil defense personnel are well prepared and in proportion to their strength did all they could, through successful execution of tasks, to assure the conditions for successful activity by our armed forces and bodies and the protection of the family members living in the rear areas and the population of the whole country.

In the name of the civil defense personnel, I can only speak with acknowledgement and gratitude of the readiness to help which the leaders of the armed forces and bodies and the subordinates have shown during the civil defense exercises.

6691
CSO: 2500

HUNGARY

OFFICIAL PINPOINTS TRADE UNION TASKS

Budapest NEPZABADSAG in Hungarian 15 Dec 79 p 1

[Excerpts] The National Council of Trade Unions [SZOT] met on Friday to review 1979 developments and trade union tasks related to the national economic plan on the basis of the report of Otto Juhasz, SZOT secretary. Enterprise opportunities for raising wages in 1980 will vary in 1980 as the result of the new producer prices as well as the income and wage regulations. Trade unions will serve social interests best if they implement principles embodied in the new regulations.

Wage development goals must be in harmony with planned enterprise results. Past experience warns that in some places the extent of wage development is set too low. This not only reduces incentive, but leads to money squandering at the end of the year in many cases. A certain portion of the wage development allotment must be used to raise working on an efficiency wage basis.

Improved labor force management, combined with SZOT-supported full employment, is one of the keys to the solution of the tasks. Presumably the new regulators will permit more flexible and expeditious use of the labor force. In connection with updating the production structure, the main effort should be to regroup the labor force within the enterprise. Sound preparation, reconciliation of labor and enterprise interests, timely briefing of the workers affected are important prerequisites.

SZOT agrees with the Central Committee's assessment of 1979 plan fulfillment and that the principal goals for 1980 should be continued improvement of the foreign trade balance and maintainance of the standard of living achieved to date.

In his talk SZOT secretary Janos Vas dealt with trade union elections which are to take place in the Spring. These will begin in early April. The SZOT meeting passed a resolution on the new system of organization of the basic organizations which will be based on shop stewards and associations of shop stewards. The third point on the agenda concerned the development of SZOT's international relations. SZOT secretary Jozsef Timmer presented a paper on topical issues of the international trade union movement.

CSO: 2500

DEVELOPMENT OF RETAIL TRADE NETWORK EXAMINED

Budapest FIGYELO in Hungarian No 46, 14 Nov 79 p 6

[Article by Tibor Pinter: "Development of the Retail Trade Network"]

[Text] More than two thirds of the commodity consumption of the populace comes from the retail trade shop network; the remainder comes from markets, consumption of one's own goods or other non-commercial sources.

On 31 December 1978 socialist retail trade maintained 36,553 shops, 14,310 retail catering sites and 4,025 place of work catering sites; about 10,600 private merchants also took part in supplying the populace.

In the past 15 years the socialist retail trade network has been expanded by about 8,000 units so that by the end of 1978 there were 17.2 percent more units available to consumers than at the end of 1963.

The basic area of the shops and catering sites increased substantially more quickly than the number of units, increasing by about 85 percent in 15 years. But the rate of growth has slowed in the past 5 years; for example, between 1963 and 1973 the total basic area increased by an average of 4.7 percent per year while this fell to an average of 3.7 percent between 1973 and 1978.

The combined effect of a number of factors is felt in the quantitative development of the shop network. Among other things this includes the fact that new urban areas were built in Budapest and in many provincial cities and in many places construction was accompanied by reorganization, which meant the elimination not only of housing but also of the tiny, obsolete shops existing in the area. In general, large and modern shops were established in the new urban areas; unfortunately, in the majority of cases this happened later than the occupation of the residences. In many places--where the territorial conditions permitted--the basic areas of the shops were increased by annex construction primarily in an attempt to improve the unfavorable storage situation.

As a result of all this the average basic area of the shops increased from 71 square meters in 1963 to 119 square meters in 1978 or from 104 square meters to 149 square meters in the case of catering sites.

Despite the significant quantitative development our homeland occupies a medium position among socialist countries in regard to the shop network available to the populace and the picture is even less favorable when compared to capitalist countries.

By the end of 1977 there were 228 inhabitants per shop in Hungary; this ratio is better in the GDR and Poland and essentially the same in Bulgaria and Czechoslovakia. In the Soviet Union, Romania and Yugoslavia more inhabitants are served per shop than here.

It is worthy of note that in the majority of socialist countries (the Soviet Union, Czechoslovakia, Romania, the GDR and Yugoslavia) the size of shops substantially exceeds that in Hungary.

Our supply of catering sites reflects essentially similar international ratios.

The regional location of the network shows a development which deviates from the medium range economic plan. Both the fourth and fifth 5-year plans posted as a goal an accelerated development of the Budapest network. But the shop network of the capital did not develop as prescribed; the increase in number of shops and catering sites and in their basic area remained well behind the national average.

The most dynamic development between 1965 and 1978 took place in the provincial cities and, therein, in the megye capitals and the megye rank cities. With the exception of the past 5 years, the network developed more swiftly in the towns than it did in Budapest too.

Development of Number and Area of Units in 1978 by Region (1965 equals 100)

	Number		Total Area	
	Shops	Catering Sites	Shops	Catering Sites
Budapest	92.8	115.9	147.6	138.7
All cities	125.2	150.8	205.9	197.3
Megye rank cities	123.9	151.8	205.5	188.4
Megye capitals	126.1	147.3	232.2	221.8
Other cities	125.3	152.3	193.5	190.9
Towns	112.2	112.2	158.4	165.1
Total	111.8	123.5	171.3	169.1

A determining role in the development of the network was played by the conception that we should create primarily modern shops with a large basic area offering a wide variety of goods. In the past 10 years the number of department stores for industrial articles doubled and their total basic area increased 2.5 times. On 31 March 1978 there were 128 general and specialized department stores with an average area of 3,000 square meters.

The development of the ABC department stores, which sell both food and daily items, was swifter than that of the department stores. The number of these increased from 207 in 1969 to 728 in 1978.

The increased basic area for department stores and ABC department stores made up half of the total increase in basic area.

With the development of the ABC department stores there was a significant decrease in the specialized foodstuffs network. For example, between 1973 and 1978 the number of fruit and vegetable shops decreased by 328, the number of dairy shops by 222, the number of baker's shops by 153 and the number of meat shops by 91.

There was no real development or expansion in the network of clothing shops in the past 10 years and they are less and less suitable for offering the increasing variety.

The number of furniture shops has not changed in the past 5 years but their basic area has increased by 50,000 square meters. This is partly because within the framework of the Domus program a number of new furniture stores with a large basic area (2,000-5,000 square meters) have been created and the same number of obsolete, small furniture shops have been abolished.

There was a significant development in the network of plant, produce and fodder shops which facilitate gardening and household plot farming.

In the villages the development of the network appears not only in the creation of new units but also in the modernization of existing, obsolete general stores. This process is characteristic primarily of the past 5 years when 1,293 general stores were abolished. The majority of them were transformed into foodstuff or household article shops because of the structural change in their trade; a smaller proportion of them were eliminated.

The structural changes in the catering network were carried out in an attempt to satisfy the needs of domestic and foreign tourism, to increase organized feeding at places of work and to develop a more cultured network.

As a result of meeting these goals the number of commercial catering sites offering hot food increased by 37 percent (by 1,007 units) between 1969 and 1978; their basic area increased by about 40 percent (by 341,000 square meters). The development of traditional dining rooms and restaurants was more dynamic between 1969 and 1973 but in the past 5 years the development of fast turnover bistros and snack bars with hot kitchens has been more dynamic.

The modernization of drink shops has accelerated in the past 5 years. In this period 873 drink shops, 15 percent of the units, were remodeled or abolished. But some of the remodeling was only nominal because many of the newly opened units (which are buffets or snack bars according to the sign) still serve hard liquor.

In 1978 place of work feeding for workers was provided by almost 1,000 place of work dining rooms and about 1,300 self-operated factory kitchens and 1,700 place of work buffets. In addition there were a number of open sale dining rooms for organized feeding of workers.

The introduction of more efficient forms of service meant a qualitative change in the network--primarily in the shop network. In the shops affected this meant technical modernization and it increased the throughput capacity of the shops.

But by the end of 1978 the ratio of shops using modern forms of service did not reach one quarter of the number of shops.

Modern forms of service are used in only a narrow sphere in catering. Even last year only 1.2 percent of the commercial catering sites and only 28 percent of the place of work dining rooms had self-service. A noticeable increase as compared to 5 years ago could be found only in the place of work catering sites.

The equipment of the retail trade network has been much modernized in the past 15 years although far from what is needed. Despite the improvement in the supply of refrigerators there is still no closed refrigeration chain between industry and trade or within the commerical shops and hardly one third of the shops selling food have deep freeze equipment.

The use of delivery trucks has increased and use of more modern equipment to transport goods is increasing. More modern tools (containers, roller cars, loading pallets) could simplify transportation between wholesale warehouses and shops and within shops. By the end of March 1978 these were used in about 4,000 shops—primarily containers. The architecture of the shops greatly hinders a greater spread and complex utilization (transportation, storage and sale) of modern transportation tools.

The great majority of the network (97 percent of the shops and 92 percent of the catering sites) operates on a permanent basis and only a few percent operate seasonally, generally in the summer months. This ratio has been constant for a long time.

In setting daily operating hours the general principle has been realized that the daily operating hours should better suit the needs of the majority of the customers, but naturally conditions of economical operation have been taken into consideration too. Although this principle is still valid there has been a significant change in the operating hours, especially for shops.

The operating hours of shops were expanded in the 1960's, the number of shops open for only one shift, 8 hours per day, significantly decreased and there was an increase in the number of shops operating for an extended shift (from 8 to 12 hours a day) or in two shifts (more than 12 hours a day).

A contrary process began in the early 1970's as a result of which the operating hours began to decrease. This process has lasted until 1978, indicating a smaller than possible utilization of the shop network.

The operating hours of the ABC department stores are most favorable from the viewpoint of the customers; in March 1978 58 percent of these were open for more than 12 hours a day while 36 percent were open 8-12 hours a day.

The operating hours of the department stores were also more favorable as compared to other shops; half of the department stores are open an average of 9 hours a day or more.

The majority of the shops, especially the clothing, hardware and culture item shops (84 percent of these), are open only 48 hours a week (an average of 8 hours a day) or less according to the most recent survey, in March 1978. (This ratio in March 1973 was between 64 and 78 percent).

As of April 1979 more than 80 percent of the shops selling industrial articles closed at 6 in the evening or earlier; which means that the populace had only 1-2 hours for shopping after work time so that the shops selling industrial articles, especially in Budapest, were constantly crowded.

Beginning in April 1979, at the initiative of the Ministry of Internal Trade, the shops selling industrial articles were kept open until 2000 hours every Thursday in Budapest and in the commercial centers of some other cities so the possibility of shopping after work will palpably improve—at least on that day.

The operating hours of commercial catering sites is ever better adjusted to the needs of the customers. Last year only 30 percent of the commercial catering sites worked a single shift; one quarter worked an extended shift; and nearly half were open for two shifts.

Trade is spending an ever increasing sum to develop and modernize the retail trade network. The value of retail trade investments put into operation in the years 1967-1977 exceeded 21 billion forints at current prices and about two thirds of that sum was in the last 5 years of the period.

In the future trade must strive for solutions which will take the place, at least in part, of network developments which are accompanied by great cost. This means primarily more efficient utilization of the existing network but another means might be a development of the network of automatic vending. This has still not established itself in Hungary. In March 1978 there were only 500 automatic vending machines in commercial operation.

The creation or operation of many shops which can be operating only uneconomically might be made superfluous by the development of a so-called mobile trade system. There have been initial steps in this direction but one cannot speak of any real progress in this area.

There have not been even initial steps in the development of mail order trade although the production and trade background needed would seem to provide a suitable basis for starting trials.

8894
CSO: 2500

FALL FIELD WORK PROGRESSING WELL, WINTER GRAINS IN GOOD CONDITION

Budapest NEPSZABADSAG in Hungarian 2 Dec 79 p 1 WA

[Text] Harvesting of crops is all but completed. Only fall plowing remains to be done. New plantings are being made now in fruit and grape-growing regions. This year corn to be used in the form of grain grew on 1.372 million hectares. This exceeds last year's hectarage by nearly 100,000 hectares. Most corn had been gathered in by 20 November. Only 2,000 hectars were still standing by the end of November in Tolna and Somogy counties. This is due to the fact that exceptionally large areas were planted to corn there in spring to replace winter-killed wheat. Since yields are good, too, it is easy to understand why harvesting in these areas is taking longer.

Last year at this time 95 percent of the corn had been gathered in. Thus the corn crop has been safely harvested from a larger area than in 1978. Because more combines-a total of 9,000-operated in the corn fields of the large farms, harvesting could progress more rapidly. Furthermore, the corn was both riper and drier so that the work of the combines was not delayed by the need to dry the corn.

A total of 1,200 hectares of sugar beets remain to be picked in six counties. No farm has more than 10-40 hectares of unharvested beets. Work has been slightly delayed by rain over the past few days, but it is only a matter of days before picking will be completed even where 30-40 hectares are involved.

Of the 2.4 million hectares of fall plowing, 400,000 hectares remain to be dealt with. The tempo of plowing has accelerated recently at those farms where such work is unfinished. The quality of the fall plowing is substantially better than it was in 1978. Last year it was especially difficult to plow the corn stubble under, and many corn stalks remained in the fields even after plowing.

This year more of the stalks were cleared away and used for fodder. Where corn stalks remained on the surface after the combines had gone through the fields, they were broken up by disc harrows so that they could be plowed under more easily. Even the winter grains sown most recently have already emerged. Those sown earlier have become hardier; those sown later are developing well and will gain strength unless winter weather sets in abruptly. It is clearly beyond dispute that the crops are in much better condition, are more developed than they were last year. The improved quality of sowing and the more favorable weather manifest themselves in the healthy greenness of the wheat, winter barley and rye fields.

CSO: 2500

BRIEFS

QUADRUPLED BENZENE PRODUCTION--The Danubian Petroleum Industry Enterprise of Szazhalombatta and the Tisza Chemical Combine cooperate in the production of benzene, an item which sells well on all markets. The Tisza Chemical Combine has set up a new plant while the Danubian Petroleum Industry Enterprise has expanded and renovated its original plant. In the course of ethylene production, the chemical combine generates pyrobenzine which is rich in benzene and readies it for further processing. This basic material is shipped to Szazhalombatta where benzene is extracted from it. The Danubian Petroleum Industry Enterprise used a license for its modernization and now produces four times as much benzene as in the past. Once the technology had been changed, energy consumption fell by 30 percent. The sum required for expansion is only a third of what would have been required to achieve increased production through building a new plant. The Enterprise completed the expansion in 45 days, using its own resources. [Text] [Budapest NEPSZABADSAG in Hungarian 12 Dec 79 p 9]

CSO: 2500

EIGHTH CONGRESS DISCUSSES SOCIOECONOMIC GUIDELINES

Warsaw POLITYKA in Polish No 44, 3 Nov 79 p 4

[Article: "Estimates and Goals"]

[Text] The Guidelines to the Eighth PZPR Congress, ratified by the 16th Central Committee Plenum, have been published. These guidelines, entitled "On Further Development of Socialist Poland and Prosperity of the Polish People," are a very extensive document, totaling approximately 200 typed pages or close to 10 printed sheets. They are divided into five sections and 88 points. Following is a discussion of the first two sections.

Section I (26 points) is titled as follows: "This Country's Socioeconomic Development in the 1970's -- Implementation of the Program Specified at the Sixth and Seventh PZPR Congresses."

Thus it is a balance sheet of that which we generally call the socioeconomic strategy of the 1970's, or "Polish acceleration," as well as a description of the difficulties and problems which we are presently combatting. The most characteristic features of the 1970's, state the guidelines, are a substantial acceleration of economic growth and overall modernization of our economy, priority attention to social goals, a substantial rise in living standards, and strengthening of our country's status in the world.

Recalling the conditions under which the new strategy began, the guidelines state that toward the end of the 1960's there arose new social and economic needs which could not be met by the socioeconomic policy of that time. This led to dramatic social stresses and the events of December 1970. The December changes made possible formulation of a new strategy, and first and foremost created a climate for innovative activity by the worker class and the entire people.

Results

Characterizing Poland's socioeconomic development in the 1970's, the guidelines enumerate the following facts, among others:

Growth of urbanization: the urban population is growing in the present decade by 4 million;

Growth of education: in 1980 we shall have more than 1.1 million persons with college degrees, 630,000 of whom will have completed their studies in the current decade;

Growth in real income, especially wages: in 1980 the average nominal net wage will be approximately 5,300 zlotys, as compared with 2,235 zlotys in 1970. All workers have received pay increases. Taking into consideration increased prices and a higher cost of living, average monthly real earnings will be approximately 50% higher than in 1970.

An increase in the minimum monthly wage from 850 zlotys in 1970 to 1,200 zlotys in 1975 and 1,800 zlotys in 1979.

Provision of jobs to persons entering the work force from many demographic peak years. A total of more than 6 million young people will have taken their first job in the 1970's, while increase in employment in the socialized economy totals 2.5 million. Women have gained a greater percentage share of total employment.

Growth in benefits and services is particularly high — from 50 billion zlotys in 1970 to more than 90 billion in 1975 and approximately 195 billion in 1980. The major items are pensions and annuities. In 1970 the average pension and annuity was 1,144 zlotys per month, while the figure this year is 2,457 zlotys. There has occurred a radical broadening of the pension-annuity system; it now covers all socio-occupational groups, including independent farmers, agents, and artisans. So-called "old wallet" pensions and annuities have been increased. Increased pension rights have been obtained for war veterans and former concentration camp inmates. A retired person over 80 years of age receives an additional 500 zloty pension payment. The retirement age has been lowered for women, persons with disabilities, and war veterans.

As a whole the decade has brought a rise in the living standards of all groups in society. Taking into consideration wages, farmer income, benefits, payments from the enterprise fund, payments from the social and housing fund, plus other income — the average real income of the statistical Pole in monetary and material form, in 1980 will be 75% greater than in 1970. Growth and expansion of social assistance to families: maternity leave has been extended from 12 to 16 and 18 weeks, and leave without pay for child care from one year to three years; universal one-time childbirth allowances have been adopted, as well as 500 zlotys additional monthly for physically handicapped children and children requiring constant care. An alimony fund was established, providing benefits in case of difficulty in collecting alimony. More nursery schools have been built — in 1980 their total accommodation capacity will exceed 100,000 children, as compared with 65,000 in 1970, and preschool facilities have grown (600,000 capacity in 1970, more than 1.2 million in 1980).

This decade marked the beginning of reduction in work time, with 16 additional days off this year. The four-brigade labor system has been considerably expanded at continuous-operation enterprises, guaranteeing more days off.

An important event was ratification in 1974 of the Labor Code, which established a uniform system of worker rights and obligations, equalizing in all areas the rights of manual and white-collar workers.

The program points of the Sixth and Seventh Congresses specified rapid growth in consumption. Targets adopted in the five-year plans in the area of production and delivery to market of goods and services have been exceeded. But target overfulfillment was even greater in the area of money income, which has altered the structure of demands and has produced new consumption aspirations. The guidelines emphasize that in many areas there has been failure to reach the targeted production volume and product variety, as well as supply, which has caused stresses in the market situation. As a result demand is still not being fully met.

Developing this theme, emphasis is placed on delays in getting capital investment on-stream, insufficient growth of agricultural production as a result of bad weather, difficulties in importing raw materials and grain as well as price increases on these commodities, plus inadequate growth in market output in small-scale industry and handicrafts. Also important is the problem of food prices and inadequate production and sale of foodstuffs. In 1970 government additional payments for food totaled only 7.5 billion zlotys, rose to more than 51 billion in 1975, and will reach 169 billion in 1980.

In spite of difficulties and stresses, there has been a substantial increase in food consumption, viewing the decade as a whole. Consumption of meat and meat products per capita will have increased from 53 kg in 1970 to 71-72 kg in 1980, fish and fish products — from 6.3 to 7.8 kg; fats -- from 20.8 to 25.6 kg, including butter from 6 to 8.7 kg; eggs from 186 to 225; fresh and canned vegetables from 92 to 110-115 kg; fresh and canned fruit from 26 to 48 kg; nonalcoholic beverages -- from 13.4 to 35.1 liters.

Growth in consumption of manufactured goods has been even greater, particularly consumer durables, due to which there has been a substantial increase in possession of consumer durables by families and households. In 1970 only one out of 20 Polish families owned an automobile, while for every 100 households there were 48 television sets, 88 radios, 64 washing machines, only 24 refrigerators, and barely four tape recorders. In 1980 almost one out of every five families will own a car, and for every hundred households there will be 87 TV sets, including nine color sets, 148 radios, 80 washing machines, including 13 automatic washers, 87 refrigerators, and 42 tape recorders.

Implementation of a long-range housing program has begun, aimed at achieving ultimate solution to this important societal problem. In the 1970's we are building 2.7 million new apartment units — one million more than in the preceding decade. At the same time the average apartment unit constructed in the socialized economy will have increased from 44 square meters in 1970 to 52 in 1980. Approximately 9 million persons will have moved into new apartments in this decade. Private construction has also increased substantially: more than half a million single-family homes will be built in the period 1971-1980.

A considerable effort has also been undertaken in the area of health care. Capital outlays for health care in the current decade are more than triple the corresponding outlays in the 1960's, while employment in the health field has increased by more than 38% — to approximately 590,000. A total of 75 new hospitals will have been built in this decade, and the total number of hospital beds is increasing by 25%. A Children's Health Center has been built, and an Oncology Center is under construction. Of great significance is coverage since 1972 of the entire rural population with free medical care.

The guidelines emphasize that there has been an increase in supply of medicines, but that demand has not been fully satisfied. This target is being given urgent priority.

An important feature of this decade is the rapid development of education and culture. Moving forward in step with the plan is a reform in the system of public education, one of the goals of which is to have 100% of our young people complete the 10-year school. Approximately 1,800 consolidated gmina schools have been established, and 98% of all 6-year-olds are enrolled at preschool facilities. Development of vocational training and higher education has ensured a substantial rise in the level of education and employment skills of the public as a whole. The number of workers with higher, secondary education and vocational training has increased by 3.9 million, and their percentage share in the total employed work force is increasing from 40% in 1970 to 65% in 1980.

Outlining the cultural achievements of this decade, the guidelines state that 83,000 new titles in the imaginative literature category will have been published in this decade, in a total of 1.2 billion copies. Newspaper circulation will have increased from 2.3 to 2.7 billion, and magazines and journals from 700 to 800 million copies. These quantities do not yet meet demands. In 1980 there will be more than twice as many houses of culture and cultural centers as in 1970. The number of museums will have increased by almost 30%. In 1970 there were 4.2 million television subscribers, while the figure will be 8.2 million in 1980.

The socialist legal system has been steadily improved. The guidelines state that changes in the Constitution of the Polish People's Republic adapting its provisions to the stage of building a developed socialist society are of great significance. Individual areas of the law have been codified, creating a modern, socialist legal system, consolidating the achievements of socialism and guarding the interests of the state and its citizens.

Factors

Following this description of society's achievements in this decade, the guidelines discuss in greater detail the problems of economic development in this decade.

They emphasize that industrial output will have increased 2.3-fold in the decade, while agricultural output will have increased 30%, or less than targeted. This is the result primarily of below-anticipation harvests, and as a consequence feed production shortfall. In the five-year period 1976-1980 agricultural production will be approximately 170 billion zlotys below target.

National income growth will also be below projections. It was targeted to increase by 38-39% in the first half of the decade, and by 40-42% in the second half. In actuality growth in the first half of the decade was considerably greater than targeted — 59%, while in the second half it is considerably below target — 16%, and 85% for the entire decade. This is a result primarily of a low industrial output growth rate, poorer agricultural performance, more difficult conditions in foreign trade, as well as failure to meet objectives in the area of management efficiency.

The capital investment process, which ensured an increase in the nation's assets by almost 75%, has been the foundation for economic development and production growth. A total of 450 new plants in key industry will have been built in this decade, including the largest industrial projects of socialism: the Katowice Steel Mill, the fuel-energy combine in Belchatow, the Lublin coalfield, the Northern Port, the chemical fertilizer plant in Police, the compact car plant in Bielsk-Tychy, etc. The guidelines appraise the effects of the economic maneuver initiated in 1976. In the capital spending area it involved shifting approximately 10% of total capital investment over to food, housing, and market production.

In this decade oil refining has increased from 7.5 million tons to 17 million tons annually, production of electricity from 65 billion to 127 billion kilowatt hours, steel production from 12 to 21 million tons, copper from 70 to 400 thousand tons, and sulfur from 2.7 to 5.5 million tons. Total generating capacity of Poland's power plants has increased from 14 to 26 thousand megawatts. Recently, however, electric power production has failed to meet demands, which is due to the low efficiency of generating plants, worsening of conditions of fuel extraction, and consequently poorer fuel quality, power-unit failures, excessive power consumption for generating plant in-house requirements, as well as excessive losses in the system. Therefore, in addition to building new power generating plants, achievement of more efficient power consumption as well as improved power system efficiency constitute an important target.

The guidelines then address development of individual branches and sectors of the economy, beginning with the electrical equipment industry, output of which has tripled, with a percentage share within the nation's total industrial output increasing to 30%, as compared with 24% in 1970. Many subbranches of the electrical equipment industry have reached the world level of technology, and this industry has put into production and boosted to large-scale production a great variety of product items meeting society's needs or essential for further development of the economy and the capital investment process. The building materials industry has increased production 2.7-fold. Chemical industry output has increased at the same rate, greatly improving domestic supply of chemical fertilizers, plastics, synthetic fibers, etc. At the same time, however, many subbranches of the chemical industry are failing to meet demand. This applies, for example, to the pharmaceutical industry, chemicals for the textile and leather industry, etc. Development of the chemical industry has been significantly hindered by import difficulties caused by the world fuel-energy crisis and rising prices on crude oil and petroleum derivatives.

Wood products and paper industry output have doubled, including construction of 10 new furniture factories, five particleboard plants, plus expansion of pulp and paper production facilities. In this latter area, however, delays in capital spending have caused a number of dificulties in domestic paper supply for publishing, as well as paper and cardboard packaging. Fifty-six new factories have been built in light industry, and old factories have been renovated. This has resulted in an output growth of 90%. Product quality and variety still leave much to be desired, and response to changing tastes and interests of the buying public has been slow.

Enormous amounts of money have been spent on the food program during this decade. Capital spending on the food industry complex exceeds 1.2 trillion zlotys, or almost three times the amount spent in the preceding decade. The heaviest spending has been in agriculture, totaling 858 billion zlotys in this decade, in comparison with approximately 320 billion in the preceding decade. Agriculture has been modernized to a considerable degree; agriculture today has 530,000 tractors, as compared to 220,000 10 years ago. The total number of grain combines has tripled. The party's farm policy consistently supports growth and development of all sectors of agriculture. In the private sector there has been a substantial increase in the role of specialized farms and specialized production operations, which are achieving greater yield of marketable products. In recent years, however, agriculture has not achieved adequate output growth, chiefly due to difficult weather conditions. In the preceding five-year period annual production figures were as follows: 20.9 million tons of grain, 47.1 million tons of potatoes, and 14.7 million tons of meadow hay, while these production figures were lower in 1976-1979:19.8 million tons of grain, 46.5 million tons of potatoes, and 14.0 million tons of hay. On the other hand, sugar beet production has increased, from 13.8 to 15.1 million tons, as well as oilseed crops from 573,000 to 672,000 tons. Food processing industry production has increased by 90%. The capital investment program in this inudstry has made it possible to place on-stream, for example, 11 meat packing combines, 13 cold storage facilities, more than 60 dairy products plants, 58 soft drink bottling plants, and more than 730 bakeries.

Large capital sums have been allocated for development of transportation and communications: 490 billion zlotys -- 2.5 times the amount in the preceding decade. Transportation is not meeting demand, however. One of the factors involved is the economy's excessive transport intensiveness and insufficient progress in making hauls more efficient. The most important undertakings in railroad transportation were the following: construction of the Central Main Line; construction of the Hutniczo-Siarkowa Line; line electrification and modernization; construction of various rail facilities and equipment. Electric and diesel motive power will handle more than 90% of freight ladings in 1980, as compared with 60% in 1970. Motor transport will have 580-600 thousand trucks in 1980, as compared with 270,000 in 1970. Full utilization of this potential has not been achieved. One of the reasons for this is a shortage of tires and spare parts, as well as poor organization of labor. The Warsaw-Katowice express highway was built in the 1970's, and construction began on highways between Warsaw and Poznan, and Wroclaw-Katowice-Krakow. The merchant fleet has almost doubled, and cargo tonnage hauled has tripled, but this does not meet our foreign trade needs. Cargo transshipment through Polish ports has doubled, in part due to construction of the modern Northern Port. Communications has been given a modern manufacturing base for producing exchanges, cable, and telephones, which creates conditions for accelerating the process of expanding phone service in this country. Installation of home telephones in the present decade will total 640,000, as compared with 370,000 in the previous decade. This does not meet demand, however.

The 1970's have brought important changes in the development of science, organization of science, as well as science's participation in solving economic and technical problems. Expenditures on research and development have increased, totaling more than 300 billion zlotys in the present decade, or 2.6 times the amount in the 1960's. Fundamental changes have taken place in the personnel potential of Polish science. In 1970 we had 18,500 persons with the titles of professor, doctor, and doctor qualifying for a assistant professor; in 1980 the figure will be approximately 40,000. Polish science has made many significant achievements, both in theoretical research and in practical solving of technical problems.

Among the factors influencing achievement of social goals, the guidelines discussed overcoming disproportions in this country's territorial development. A special role was played here by the reform of administrative divisions and the system of local administration. The new system has become a factor which is activating regions and has increased the influence of local residents on development of their own area. There has also been a decrease in disproportions in city management and administration. Planning has been initiated on a macroregion scale. Implementation of the WISLA program has begun.

This decade is a period of growth in the role of foreign trade and economic cooperation with other countries. The guidelines emphasize the development of socialist integration of the CEMA member nations as well as our growing contribution toward integration, specialization and co-production undertakings -- particularly the development of large-scale production of certain kinds of machinery and equipment, planned to coincide with the needs of the entire socialist community. Favorable changes have taken place in the structure of export. In 1970 unprocessed raw materials as well as foodstuffs were predominant in exports. Today the percentage share of these items is considerably smaller, while there has been an increase in the percentage share of machinery and equipment, including complete plants, ships, and automotive equipment. We have begun utilizing foreign credit on a large scale, utilized particularly for the import of complete plants as well as modern industrial processes. The guidelines emphasize that Poland is solidly meeting its credit obligations. In summary, foreign trade has almost quadrupled during the current decade.

Major changes took place in international economic relations in the middle of the decade, which exerted considerable influence on our development. The first factor was a rise in crude oil prices, which initiated a price increase first on refined products, and subsequently on other raw materials and finished products. This ultimately weakened economic activity in developed capitalist countries, reduced their import capabilities, prompted protectionist measures, etc. In the years 1971-1978 world prices rose at an annual growth rate in excess of 12%.

The foreign trade situation was also affected by domestic factors, particularly worsened agricultural performance. In the period 1971-1975 we earned 800 million foreign-exchange zlotys on export of agricultural raw materials and foodstuffs exceeding imports of these goods. In 1976-1978, however, imports exceeded exports by 6 billion foreign-exchange zlotys. This has the greatest effect on import of grains and feeds, which currently amount to 7.8 million tons annually. Over a period of 10 years these imports consume approximately 8 billion dollars.

And finally, there is one more disadvantageous factor: shortcomings in functioning of the economy. In some areas we have not achieved sufficient improvement in efficiency of management as well as progress in organization of labor and social discipline. In capital projects we have failure to meet completion schedules, and overruns over estimated cost. There has been insufficient progress in economizing in raw materials and supplies; consumption of energy, cement, metallurgical materials, etc is too high.

The guidelines emphasize favorable changes in improving functioning of the economy, planning and management of economic units. More difficult conditions in the mid-1970's however, resulted in operation of the economic-finance system becoming limited or modified.

Summing up the balance sheet of this decade, the guidelines once again stress a very high rate of socioeconomic development, with priority to social goals. Thanks to this it has been possible to achieve a considerable improvement in living standards, to eliminate or substantially to reduce social disproportions. The guidelines state that all our activities in this decade have been aimed at creating for everybody optimal conditions for development of the individual and productive, vigorous activity in society.

Proposals

The second section of the guidelines bears the title: "Party Social Policy, Consolidation of the Family, Development of the Productive Resources of the People." It contains 11 points (from 27 to 37) and presents proposed goals and social targets which we shall seek to achieve in the coming decade.

The guidelines make the principal element of social policy the family — the basic unit of societal life, which influences one's character and personality, disseminates systems of values, and passes on the people's heritage.

One of the characteristic features of this area is the very rapid growth in the number of young families, which is connected with the fact that persons born during the baby boom years are entering adulthood. These families require special care and creation of conditions promoting preparation of the younger generation for life in the family and society.

Following are the most important concrete measures proposed by the guidelines in the area of family care, living standards, and other social matters:

Development and universalization of preschool education. Construction of a network of preschools, development of various forms of preschool care, particularly in small communities. Development of a network of nursery schools.

The guidelines specify improvement and broadening of the system of benefits and services for mothers with small children.

Improvement of the financial and social situation of families with many children, single-parent families, and families caring for persons with disabilities. The system of alimony fund benefits will be improved.

The basic benefits fund (used to finance the so-called 13 pensions) as well as the social and housing funds will grow by 30-35% in the coming 5 years — to 70-75 billion zlotys. These funds should be utilized to a greater degree to meet the needs of large families, single-parent families, and the lowest-income families. Social assistance should be determined by the level of income per family member.

Organization of work force rest and recreation requires changes, so that priority in utilization of vacations and other forms goes to families with children. Social activities should be more extensively organized on an interenterprise scale, with establishment of joint administration and management as well as coordination of facilities with city and village development plans.

The social security system will be improved, a system which already covers the entire population. Money benefits will increase by 27-32% in the next 5 years -- to 240-260 billion zlotys in 1985, with pensions and annuities increasing by 35-40%. Pension annuities for farmers and their families will be universally adopted beginning in mid-1980. Present pension benefits will increase. The financial situation will improve for pensioners and annuitants supporting families. The principles and procedures of taking employment by pensioners and annuitants will be improved.

The health service will add 25-30 thousand hospital beds, which will improve medical care conditions, primarily in maternity and children's wards. A network of small-community and village polyclinics and medical care centers will be built, as well as a network of pharmacies. The guidelines specify improvement in supply of medicine. In health care emphasis will be placed on prevention as well as a campaign against social diseases. The campaign against alcoholism must be intensified.

Special attention will be focused on improving the quality of the Polish diet. There will be improvement in the structure of deliveries of foodstuffs, there will be increased processing and refining of raw foodstuffs and increase in variety of food items, especially high-protein foods. There will be an increase in the production and availability of nutrient products, semi-finished food products, and children's items.

Production and supply of manufactured goods will increase at a more rapid rate than production and supply of foodstuffs, which will improve the overall structure of consumption. Furniture deliveries will increase by 30-35% in the next 5 years. There will be an improvement in supply of household articles, clothing and haberdashery, etc. Intensive development of services, including trade -- will also be of considerable significance for improving living conditions for the family.

A total of 1.7 million dwelling units will be built and renovated in 1981-1985, including approximately 1 million 550 thousand new units and 150,000 renovated units. Local authorities and employers must give greater assistance to housing construction bv individuals. It is necessary to improve the system of housing exchange, creating incentives and advantageous conditions for changing housing, adapted to the family situation, as well as combatting profiteering in the housing market.

Total consumption is to increase by 13-15% in the coming 5 years. Real per capita income will increase by 10-12%, including a 9-11% increase in real wages. A further increase in real income for farmers and agricultural workers will be secured -- linked with a growth in farm production.

Price policy will also be subordinated to attainment of planned income and real wage growth. This demands gradual and systematic improvement in the price structure as well as strengthening of central control of the price system, adoption of more effective monitoring, and elimination of unwarranted price increases.

In wage policy there will be continued the gradual boost in minimum wage as well as a relative increase in earnings for hard physical labor and work deleterious to health. Wage systems should make it possible to achieve growth in earnings in the same job, on the basis of improved job performance, increased job skills as well as length of employment.

We shall endeavor to eliminate unjustified differences in earnings, increasing control over the sources of these earnings.

The principle of full and efficient employment will be observed. Priority in work force growth will go to the services as well as certain areas of collective consumption.

A program of increasing the total number of workers' days off will be implemented. The guidelines recommend more flexible and differentiated solutions in individual subbranches and enterprises.

The final point in this section of the guidelines deals with targets in the area of development of physical culture, sports, and vacation travel. They recommend increase in quantity and variety of vacation travel programs and better adaptation of these programs to the differentiated requirements of families and individual social and occupational groups. Vacation resort and sports facilities will be expanded. A network of inns and camping facilities will be established. Foreign tourist travel will be developed, especially exchange with socialist countries.

The above social goals are contained in the guidelines for the Eighth Congress of the PZPR. Next week we shall present the remaining sections of the guidelines.

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POLAND

'MODO' MODEL OF ECONOMIC GROWTH RATIOS DESCRIBED

Warsaw GOSPODARKA PLANOWA in Polish No 9, Sep 79, pp 465-471

[Article by Zdzislaw Sadowski, Joanna Kotowicz and Kazimierz Cwalina: "An Experimental Model of General Growth Proportions in the National Economy: The 'MODO' Model"]

[Text] I. The preparation of a draft for the five-year socio-economic development plan of a given country is by the nature of things a multi-stage process.[1] In an initial phase, before the formulation of a developed version of the draft plan can be approached, a number of preparatory investigations and studies must be executed. On the one hand sectoral studies are required, which have to supply the information indispensable for the preparation of development programs for individual sectors and for separate complexes of the national economy, such as, for example, the power industry, agriculture, or housing construction. On the other hand there is also need for studies of a comprehensive type, devoted to a preliminary analysis of the general problems of the given five-year period, and in particular to the analysis of the influence of the basic background conditions on the growth rate and the evolution of the main growth proportions.

The aim of this latter type of studies is to obtain a general picture of the proportions of economic growth in the given period, taking into account the existing or anticipated constraints, and to outline the field of choice as well as the possible growth strategy variants. It is obvious that these studies cannot yield unequivocal answers to the question, which variant should be chosen. That answer is the subject of political decisions. But the studies should contribute to an accumulation of information on the consequences of one or another set of decisions, thus making possible an appropriate consideration of issues at the planning level.

Hence what is required is a tool which can serve this aim in the most uncomplicated manner possible. It is our conviction that a simulation-type model working with data of a high degree of aggregation can be such a tool. Such a model could be utilized for a synthetic working analysis of the conditions shaping the basic growth proportions over a multi-year period.

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[1] An earlier version of the present paper was presented at the conference on "Methodological Problems of Comprehensive Planning for the Long and Medium Term," Yerevan, 15-22 June 1979. The model and results of its application were presented at a scientific seminar of the Planning Institute on 9 December 1978.

Research tools of other types cannot fulfill this task. For instance, optimization models cannot fulfill it because they rely on arbitrarily formulated objective functions. The acceptance of an objective function of this kind for the analysis of the macro-proportions of medium-term socio-economic development treatens to simplify excessively the complex system of development objectives of the socialist economy and may lead to false conclusions with respect to the character of structural changes.

A developed econometric model based on disaggregated production functions of the inter-branch flow [input-output] type could constitute a tool for structural analysis. But such models are not in competition with an aggregated working model since they belong to a different phase of planning considerations. For the most preliminary phase of planning reflections their degree of complexity is too high and their design aimed at too much precision, which leads an incapacity of securing satisfactory data and the cumulation of sectoral errors. Since it is difficult, however, to define the most appropriate degree of aggregation a priori, the issue of the manner of utilization of an aggregated simulation model and more articulated econometric models in the preparation of the five-year plan must be considered a separate problem, as does the question of the possibility of an eventual linking together of these two instruments.

In any case, the advantage of an aggregated simulation model for the requirements of initial planning reflections should be based on its simplicity, on the fact that it can be a working model, with the help of which one can easily and simply investigate the consequences—and the conditions--of specified policy changes, such as operations altering the magnitude of imports and exports or the magnitude of investment outlays (in the aggregate or for specific sectors). This model should thus be based on explicitly specified assumptions and give the technical capacity for easily changing these assumptions.

The MODO model which we present has been designed with an eye to satisfying these postulates. The method employed in its construction depended on the formalization of assumptions and linkages between economic magnitudes which came to the fore in the course of concrete work on the preparation of a variant of the synthetic balances for the 1981-1985 five-year plan of the People's Republic of Poland. In its present form the model was thus specifically designed for the analysis of plan proportions in this quinquennium. It is an experimental model, however, in the sense that its construction has not yet been fully completed, even though it has found certain analytical applications Moreover, some fundamental components of the model have been filled in with hypothetical data in the face of incomplete planning information. In spite of these limitations the trial applications of the model to date in our opinion justify the appropriateness of such an approach and point out the desired directions of further work on its improvement.

In the present paper we present the conceptual aspect of the model, but not the results of its application. Our model has been based on the method of systems dynamics elaborated mainly by J. Forrester.* In this method basic significance attaches to the feedback loops and lags occuring in the given system. The interaction of the diverse feedback loops and lags is considered the basic non-intuitive condition explaining the behaviour of the system (in our case a national economy) in the past and makes possible the prediction of its behaviour in the future. For us it was of special significance that the method of systems dynamics concentrates attention on the analysis of the main qualitative features of the behaviour of the system as a whole without assigning excessive weight to the specific numerical characteristics of its individual elements. It permits the rendering of the qualitative characteristics of the behaviour of the system even in cases where the numerical attributes of its elements can be given only in a rough approximation. This is an advantage of undisputable significance for the stage of pre-plan investigations.

The MODO model was written in the "Dynamo" language. In choosing "Dynamo" as the programming language the ease of obtaining different variants for the development of general growth proportions in result of changed numerical assumptions was of basic significance for us, as well as the ease of modifying the equation structure of the model.

II. The general concept of the model is based on the attempt to connect to each other the main growth constraints and growth factors of social production in the period under investigation. For reasons to be discussed below we have used both the gross [social] product and the national income as variables representing social production in the model. At the base of the construction of the model lay the notion of presenting gross product as a magnitude dependent on two factors, imports and productive investments. The use of imports as an independent variable in the production function stems from the need of reflecting the basic constraint to growth effective in the period under analysis. The supply of labor, on the other hand, was in general not taken into account in this phase of work on the model. This can be interpreted as an assumption that any changes in the growth rate of employment are offset by changes in the growth rate of labor productivity.

We considered it inexpedient, however, to attempt the determination of the parameters of a two-factor production function of this kind, since this would have been an artificial approach. Instead, the formalization of the dependency of production on investments and imports was based on the specification of two single-factor functions in which the dependent variable is called production potential. We thus generate two levels of production potential: a level determined by productive investments and a level determined by imports. The volume of the gross product corresponds to the lower of these levels.

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*[Jay W. Forrester, Industrial Dynamics (Cambridge, Mass.: MIT Press, 1961) and World Dynamics (Cambridge, Mass.: Wright-Allen Press, 1971)].

If, for instance, the production potential defined by imports is lower than the potential determined by investments, this expresses the appearance of an import constraint in the given period which causes a less-than-full utilization of the productive apparatus.

The opposite situation would express a full utilization of the productive apparatus while a reserve of import funds exists which exceeds the current requirements of production. This situation is not analyzed because in reality it does not occur.

We can agree that in balancing the five-year plan the aim should be to equalize the two potentials. This may be difficult, however, owing to constraints resulting from the economic proportions which had taken shape during the preceding period. The formulation proposed thus constitutes an approach facilitating the direct comparison of different development proportions in the light of the conditions imposed by earlier developments, above all the balance of payments and the course taken by investment processes.

In the field of external equilibrium a basic issue is the manner of dealing with the effects on the rate of economic growth stemming from our credit relations with the capitalist countries. Owing to the complexity of this problem a simplified solution based on hypothetical data has been employed in the model.

In this solution it was assumed that the volume of credits drawn and the volume of total indebtedness are in the first instance a function of the trade balance with capitalist countries and the repayment of credits drawn in earlier years together with interest payments. It was assumed that the credit drawn in successive years is equal to the balance-of-payments deficit in trade with capitalist countries, including interest payments and the amortization of credits. This [newly drawn] credit was divided in fixed proportions into long-term and medium-term loans. Hypothetical repayment periods and interest rates were assumed, and the repayment of the loans was assumed to occur in equal installments in accordance with the repayment periods to which loans were assigned. This schematized solution described here was applied also to determine the volume of credits drawn in the period preceding the first year of the period under analysis.

This simplified solution can easily be modified and expanded, without affecting the general structure of the entire model, depending on the availability of appropriate data.

The above-mentioned background conditions affecting economic growth exert a constraining influence on the growth rate of national income under present circumstances. This influence can to a certain degree be weakened through reductions in the material-intensiveness of production, a change which constitutes the fundamental trend of technical progress. The influence of changes in material intensiveness is reflected in the model in that the magnitudes of both gross [social] product and national income produced are taken into account in the dependency chain. The ratio of the growth rates of these two magnitudes is one of the basic coefficients of the model (co-efficient RDP). It indirectly expresses the development of the material intensiveness of national income and can be treated as a decision variable since it is possible to vary the assumptions as to the development of the magnitude of this coefficient. Here it must be taken into account that a lowering of material intensity (positive linkage) is obtained, among others, at the expense of increasing the value of imports or of increasing productive investments in certain branches (negative linkage).

III. Stating the model concepts in the "Dynamo" language required the division of the model variables into three basic groups in accordance with the rules of this language: level variables, rate variables (also called variables of level change intensity), and auxiliary variables. A certain limitation of the "Dynamo" language consists in the fact that feedback loops can be expressed in the model only by means of variables of the first two groups, whereas in the sphere of the third group interdependent equation systems are not admissible.

The level variables are the following:

--production potential determined by investments (ZPGM);

--production potential determined by imports (ZPGI);

--value of industrial production, at constant prices (PP);

--value of productive fixed assets (MAJP).

The rate variables are:

--the annual increments in productive fixed assets (PMAJP);

--the annual increments in industrial production (RPP);

--the annual increments in production potential determined by investments (RZPGM);

--the annual increments in production potential determined by imports (RZGPI).

All remaining variables are technically auxiliary variables. However, among these variables two basic groups must be distinguished. The first is made up of those auxiliary variables which determine the development of the rate variables and in this manner exert an active influence on the behaviour of the model. In this group belong some basic economic magnitudes, such as gross [social] product, national income, investment, imports, exports, [foreign] credits, total indebtedness. In addition, the basic coefficients of the model, such as the RDP coefficient mentioned above and others which will be discussed below, also belong in this group.

A fundamental issue for the design of the model is the decision on which of the auxiliary variables in this group should be set exogenously. Exogenous variables fulfill two types of roles in the model: that of constraining assumptions or that of decision variables. With the given structure of equations in the model, different variants are obtained by means of changes in the assumptions with regard to selected exogenous variables. In the version of the model presented here the basic exogenous variable of the decision type is imports. Exogenous variables are also the basic coefficients of the model, the magnitude of which has been determined on the basis of empirical data relating to the past or of assumptions regarding their anticipated development in the future.

The second group of auxiliary variables consists of variables of a resultant type, which are not linked into the feedback loops and do not exert an active influence on the behaviour of the model. This group includes the magnitude and the growth rate of consumption and also the coefficient expressing the share of total debt service in the value of exports.

IV. The current working version of the model (MODO 3) contains 98 equations. It is too extended to be presented in its entirety in the present paper. Hence we limit ourselves to the discussion of four main nodes of interdependencies, each of which represents a developed conception of one of the basic linkages in the model:

A. The linkage between imports and the growth of the gross [social] product;

B. The linkage between the volume of productive investments and the growth of gross product;

C. The linkage between the balance of payments with capitalist countries and the debt service;

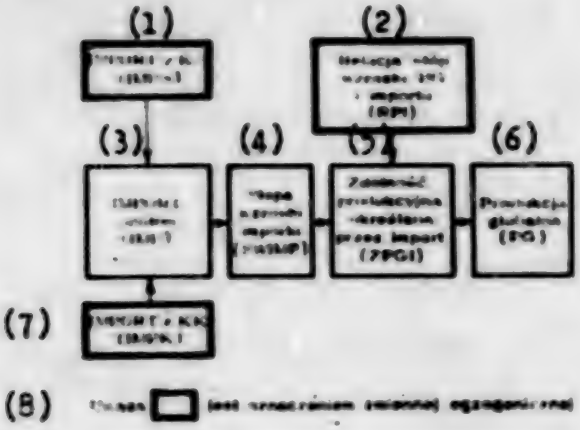
D. The linkage between the volume of productive investments and the trade balance (and consequently the national income available for distribution).

The graphical presentation of these interdependency nodes aims at giving a schematized picture of the logic of the design of these elements of the model with special attention to the feedback loops and to indicating the variables taken as exogenous.

A. The Import-Gross Product Linkage

The linkage between the volume of gross product and the volume of imports is expressed through the intermediation of the variable "production potential determined by imports" (ZGPI; see fig. 1). We treated as exogenous variables the volume of imports from socialist countries, the volume of imports from capitalist countries, and the ratio of the growth rates of gross product and imports—the RPI coefficient of the model which indirectly expresses the import intensiveness of gross production. In order to outline the method of approach, we present below the manner of construction of the assumptions relating to these exogenous variables.

Fig. 1 The Import-Gross Product Linkage



Key:

1. Imports from socialist countries (IMPS)
2. Ratio of growth rates of gross product and imports (RPI)
3. Total imports (IMP)
4. Growth rate of imports (SWIMP)
5. Production potential determined by imports (ZPGI)
6. Gross [social] product (PG)
7. Imports from capitalist countries (IMPK)
8. Note: [Heavy outline] indicates exogenous variables

In the model computations employed until now an unchanging high growth rate of imports from socialist countries was assumed, whereas with respect to imports from the capitalist countries--as the main decision variable of the model--varying assumptions were used. In further work we intend to employ variants also for the assumptions regarding imports from the socialist countries, taking into account the growing possibilities of accelerating the growth of trade exchanges in the framework of the CEMA. The variants used for the growth of imports from the capitalist countries, on the other hand, took into account expectations regarding exports and credit drawings under conditions of recession in Western markets and of uncertainty as to the future dimensions of trade turnover with these countries.

The assumptions regarding the RPI coefficient were based on observation of its behaviour in past years, with the reservation that the current decline of import-intensiveness is recognized to be a temporary phenomenon. Hence it was assumed that it will rise again to the level reflecting its trend value.

B. The Investment-Gross Product Linkage

The dependence of gross product on investment is captured through the intermediation of the variable expressing the magnitude of production potential determined by investments (ZPGM; see fig. 2).

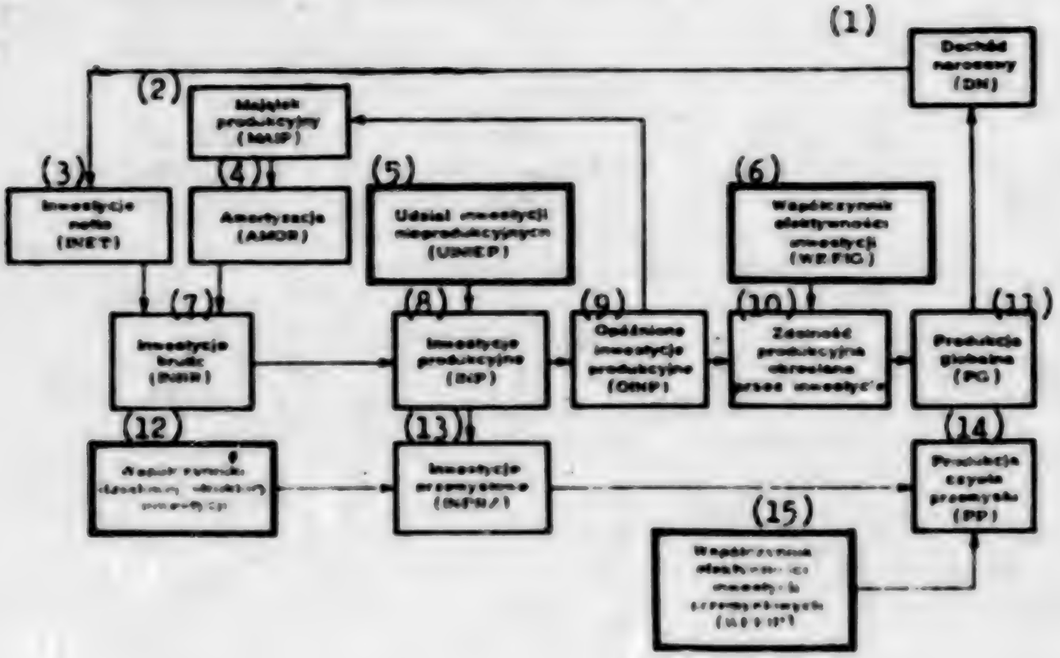
This magnitude is determined by the size of investment outlays--taking into account a two-year time lag--and by the coefficient of investment effectiveness (WEFIG) which is treated as an exogenous variable.

In the basic variant of the model it was assumed that this coefficient will remain at the same level as in the initial year through the entire plan period. In further stages of the modelling work the possibility of varying this assumption is envisaged.

Other exogenous variables in the system of linkages between investment and gross product are the coefficients in the sectoral structure of productive investment and the share of non-productive investment in gross investment. The hypothetical assumptions regarding the evolution of these variables in the basic variant of the model took into account--as a constraining condition--the postulate of an absolute priority for and accelerating growth of non-productive investments, including in particular the assurance of the planned high growth rate of investments in housing construction. It was also assumed that the growth rate of investments in agriculture will equal the growth rate of total investment.

In the system under discussion two obvious feedback loops appear: that between the volume of productive investments and the volume of productive fixed assets and [its] depreciation, and that between the volume of net investment and national income in the next period.

Fig. 2 [The Investment-Gross Product Linkage]


(1)
Dochód narodowy (DN)
(2)
Majątek produkcyjny (MAJP)
(3)
Inwestycje netto (INET)
(4)
Amortyzacja (AMOR)
(5)
Udział inwestycji nieprodukcyjnych (UINIEP)
(6)
Współczynnik efektywności inwestycji (WEFIG)
(7)
Inwestycje brutto (INBR)
(8)
Inwestycje produkcyjne (INP)
(9)
Opóźnione inwestycje produkcyjne (OINP)
(10)
Zdolność produkcyjna określana przez inwestycje
(11)
Produkcja globalna (PG)
(12)
(13)
Inwestycje przemysłowe (INPRZ)
(14)
Produkcja czysta przemysłu (PP)
(15)

Key:

1. National income (DN)
2. Productive [fixed] assets (MAJP)
3. Net investment (INET)
4. Depreciation (AMOR)
5. Share of non-productive investments (UINIEP)
6. Investment-effectiveness coefficient (WEFIG)
7. Gross investment (INBR)
8. Productive investments (INP)
9. Lagged productive investments (OINP)
10. Production potential determined by investments [ZPGM]
11. Gross [social] product (PG)
12. Coefficients of sectoral structure of investment
13. Industrial investments (INPRZ)
14. Industrial net production (PP)
15. Effectiveness coefficient for industrial investment (WEFIP)

[Note: heavy outline indicates exogenous variable]

C. The Balance of Payments--Debt Service Linkage

In the interaction module shown in fig. 3 the debt service is the resultant magnitude. It depends on the total sum of indebtedness, which is composed of long- and medium-term debt. Short-term credits have been omitted in the analysis since it was assumed that they will be maintained at an unchanged level.

The debt total for a given year is determined by the credits of the preceding 8 years which remain to be repaid. New foreign credits are determined by the state of the balance of payments with the capitalist countries. A feedback loop links the volume of debt service and the balance of payments with the capitalist countries.

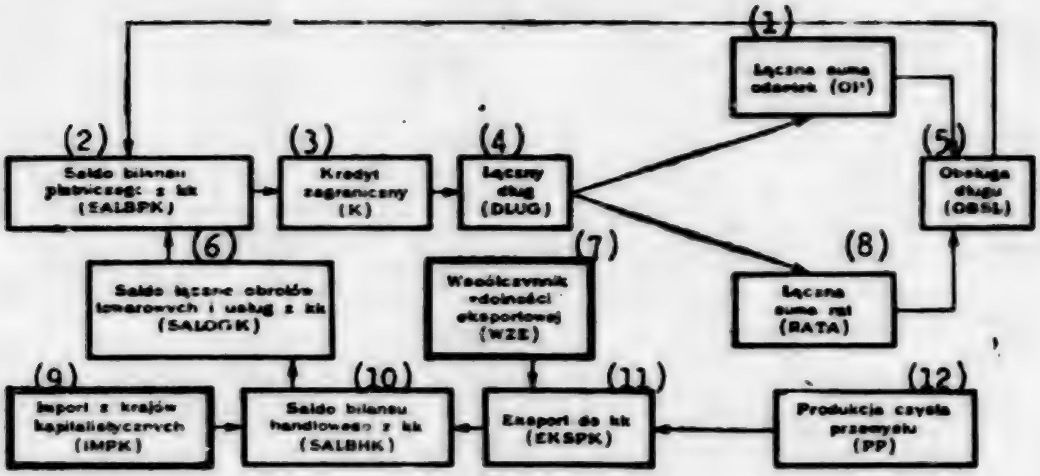
Beyond this the status of this balance is determined by the balance of commodity and service flows. It should be remembered that imports from the capitalist countries are a decision variable, while exports are determined by the growth of net output in industry and the so-called export capacity coefficient (WZE) which is an exogenous variable. This coefficient, the ratio of the volume of exports to capitalist countries to the volume of industrial production, is based on the observation of the trend of past years, which is characterized by a slow increase in this ratio, and the assumption that this trend will continue.

D. The Investment--Trade Balance Linkage

In the module of interdependencies between the size of investment and the volume of foreign trade flows two exogenous variables, WZE and WEFIP, have been introduced (see fig. 4). The coefficient of export capacity [WZE] has been mentioned earlier. The industrial investment effectiveness coefficient (WEFIP) is conceived as the ratio of the increment in industrial production to investment in industry. As one of the simplifying assumptions a two-year lag was posited to intervene between the execution of investment outlays and the gain of an increment in industrial production. We envisage that this assumption, which is of an aggregate character, will be differentiated in further work on the model, which will require appropriate adjustments in the WEFIP coefficient. At the present stage of the work a slow increase in this coefficient is being assumed.

The growth of industrial production, including export-oriented production, has a beneficial effect on the development of the foreign trade balance. The growth of exports, in reducing the foreign trade deficit, directly exerts a negative effect on the level of national income available for [domestic] distribution and hence activates a negative feedback loop. However at the same time it permits a change in the assumptions regarding the volume of imports, which acts to increase the level of national income produced, and consequently also that of national income distributed. Hence from this point of view we are dealing with a positive feedback loop. The result of the interaction of these two linkages can be different in different variants. The level of national income distributed in turn determines

Fig. 3 [The Balance of Payments—Debt Service Linkage]

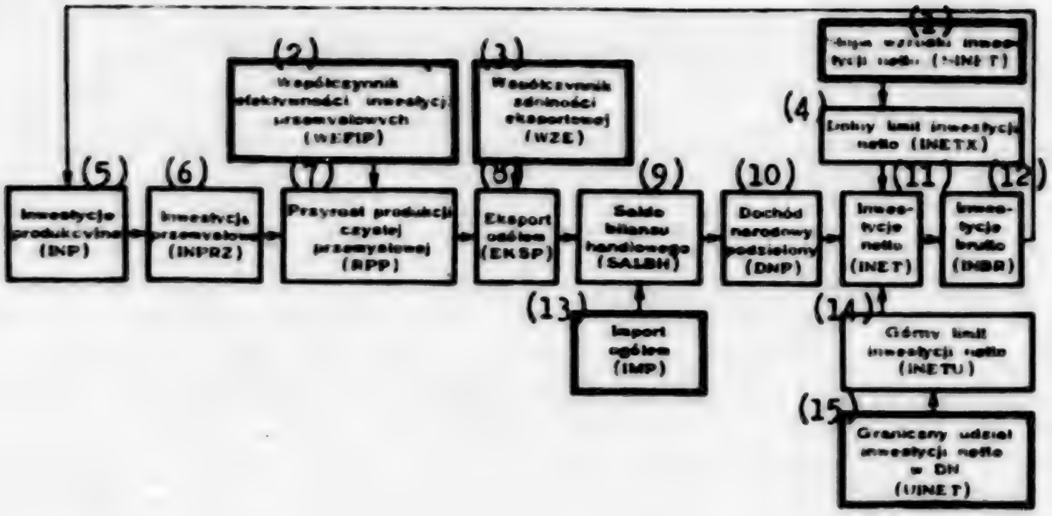

(1)
Łączna suma odsetek (OP)
(2)
Saldo bilansu płatniczego z kk (SALBPK)
(3)
Kredyt zagraniczny (K)
(4)
Łączny dług (DLUG)
(5)
Obsługa długu (OBSL)
(6)
Saldo łączne obrotów towarowych i usług z kk (SALOGK)
(7)
Współczynnik wydajności eksportowej (WZE)
(8)
Łączna suma rat (RATA)
(9)
Import z krajów kapitalistycznych (IMPK)
(10)
Saldo bilansu handlowego z kk (SALBHK)
(11)
Eksport do kk (EKSPK)
(12)
Produkcja czysta przemysłu (PP)

Key:

1. Total [annual] interest payments (OP)
2. Balance of payments with capitalist countries (SALBPK)
3. [New] foreign credits (K)
4. Total debt (DLUG)
5. [Annual] debt service (OBSL)
6. Trade balance with capitalist countries in goods and services (SALOGK)
7. Export-effectiveness coefficient (WZE)
8. Total [annual] debt amortization installments (RATA)
9. Imports from capitalist countries (IMPK)
10. Trade balance with capitalist countries [goods only] (SALBHK)
11. Exports to capitalist countries (EKSPK)
12. Net industrial production (PP)

[Note: heavy outline indicates exogenous variables]

Fig. 4 [The Investment--Trade Balance Linkage]


(1)
Stopa wzrostu inwestycji netto (SINET)
(2)
Współczynnik efektywności inwestycji przemysłowych (WEFIP)
(3)
Współczynnik zdolności eksportowej (WZE)
(4)
Dolny limit inwestycji netto (INETX)
(5)
Inwestycje produkcyjne (INP)
(6)
Inwestycje przemysłowe (INPRZ)
(7)
Przyrost produkcji czystej przemysłowej (RPP)
(8)
Eksport ogółem (EKSP)
(9)
Saldo bilansu handlowego (SALBH)
(10)
Dochód narodowy podzielony (DNP)
(11)
Inwestycje netto (INET)
(12)
Inwestycje brutto (INBR)
(13)
Import ogółem (IMP)
(14)
Górny limit inwestycji netto (INETU)
(15)
Graniczny udział inwestycji netto w DN (UINET)

Key:

1. Growth rate of net investment (SINET)
2. Coefficient of investment efficiency in industry (WEFIP)
3. Coefficient of export capacity (WZE)
4. Lower limit of net investment (INETX)
5. Productive investment (INP)
6. Industrial investment (INPRZ)
7. Increment in net industrial production (RPP)
8. Total exports (EKSP)
9. Trade balance [goods only] (SALBH)
10. National income produced (DNP)
11. Net investment (INET)
12. Gross investment (INBR)
13. Total imports (IMP)
14. Upper limit of net investment (INETU)
15. Limit value for share of net investment in national income (UINET)

[Note: heavy outline indicates exogenous variables] the volume of net and gross investment outlays, and the linkage between these two magnitudes and productive investments closes the loop.

The model has been provided with two conditions constraining the dimensions of net investment outlays. One limit is determined by the exogenously set maximum share of net investment in national income. The second limit results from the hypothetical assumption regarding the development of the growth rate of net investment in successive years. The volume of net investment in each successive year is taken to be at the level of the lower of these limits.

With these assumptions and the design of the model as described, the share of the consumption fund in national income available for distribution is a magnitude obtained as the result of the solution of the equation system.

V. The model presented here has been employed to analyze the influence of variations in the assumptions on the development of the general proportions of economic growth in the period under investigation. Variants were tested in particular regarding the assumptions for the two economic policy fields of greatest importance in that period: (a) import and [foreign] credit policy and (b) allocation decisions.

In the foreign trade field, the tests were aimed above all at determining the influence on the overall rate of economic growth of differing assumptions with respect to the size and growth of imports from the second [convertible currency] payments area. Among others, the following variants were analyzed:

--a reduction of the absolute volume of imports from capitalist countries in the initial phase of the period under investigation, followed by accelerated growth in the ensuing period;

--stabilization of the volume of imports from capitalist countries in the first period, followed by acceleration of growth at a lower rate than before;

--a reduction of the growth rate of imports from capitalist countries to the rate indispensable for the maintenance of a moderate growth rate of national income distributed.

In the present phase of research, the assumptions regarding trade with the socialist countries were not varied. The possibility of using variants here too should be taken under consideration in the next stage of the work.

Further, the possibility of varying the assumptions relating to the coefficient of export capacity (WZE) must also be investigated. This coefficient was not altered since in the basic variant of the model a relatively high growth rate of exports to capitalist countries was obtained, one which was close to the absorption limit of this market for our exports. Hence the magnitude of the WZE coefficient accepted in the base variant can be considered to be one which secures the fastest reduction of the foreign debt service burden on exports feasible.

Experiments with variants of allocation assumptions were conducted by means of a search for linked assumptions regarding the allocation of investment funds and the volume and dynamics of imports. The necessity for concentrating attention on this problem derived from the observed tendency of the increase in production potential determined by investment (ZPGM) to exceed in the period under investigation the increase in production potential determined by imports (ZPGM). Hence the search was directed at finding variants which would weaken this tendency or even lead to an equalization of these two magnitudes.

Among others, the following main variants were investigated:

--an "anti-investment" variant focused on a sharp curtailment of the growth rate of net investment;

--a "pro-import" variant consisting of a quite substantial acceleration of the growth rate of imports;

--a "mixed" variant, in which a more moderate growth rate of imports from capitalist countries is assumed, as well as a somewhat milder reduction in the growth rate of investments than in the first variant;

--a variant assuming a strong increase in the share of non-productive investments in total investment outlays, together with the assumptions of the mixed variant.

The choice of these variants points to the line of reasoning which was accepted. Their comparison indicated the central significance of a pro-export orientation as a factor neutralizing the tendency noted above. It should be mentioned that in varying the assumptions in the field of investment allocation no changes were made in the assumptions regarding the investment-effectiveness coefficients (WEFIP and WEFIG), in view of the fact that at the present stage of model design the interrelations between changes in the investment-effectiveness coefficients and changes in the structure of investment have not yet been investigated.

VI. The present form of the model is not the final one. Further work on the model is envisaged which will proceed in four directions.

The first direction involves the endogenization of some variables hitherto treated as exogenous. This concerns in particular some of the coefficients, such as [the export capacity coefficient] WZE. This will require some expansion of the model through the introduction of additional interdependency modules, which in turn necessitates prior preparatory work both of a theoretical and an empirical type.

The second direction involves the development of variants for elements of the logical structure of the model, with the aim of enriching its conclusions for planning purposes. Owing to the level of simplification of the model there is no certainty that the logical structure adopted reflects the actual system of interdependencies in the best manner. Hence what is at issue is the answer to the question, how would the influence of the same politico-economic assumptions (e. g., assumptions on the growth rate of imports or on the volume of foreign loans) look if certain changes in the logical structure of the model were introduced. At the same time excessive expansion of the model should be avoided. First, because the employment of the model for the preliminary phase of planning consideration, requires that it should not be overly complicated. And second because it is well known that the introduction of complexity into models of this type contributes a merely fictitious increase in precision, while the picture of the truly fundamental linkages will be obscured by a complex of relationships of small importance for the behaviour of the model.

The third direction consists of a certain expansion of the model, in particular by means of the introduction of variables expressing elements of the balance of [personal] incomes and expenditures of the population. This has the aim of permitting the model to reflect the influence of different variants of growth proportions on the development of [consumer] market equilibrium. In the present phase of the modelling work this aspect of the economy is expressed only through the growth rate of national income produced, the growth rate of national income distributed, and the consumption fund. We should, however, go beyond the consumption fund and look for answers to the question as to how the growth of the wage fund shapes up in comparison to production for consumer market needs.

The fourth direction depends on a certain disaggregation of the model. One of the difficulties here consists of the determination of the appropriate degree of disaggregation. This matter is partially linked with the preceding direction of further work, since the expansion of the model in the manner described above would require a corresponding disaggregation of production and imports. Beyond this the disaggregation of production and imports has an autonomous significance for a more realistic comprehension of the dependency of gross product on imports. For this purpose imports of production supplies would have to be separated from imports of investment goods and consumer market goods, which in itself would not pose any difficulties. There exists a temptation, however, to go on to the disaggregation of production and of imports of production supplies by sectors of activity (all basic sectors) and branches of production (eight branches in the sector "industry"). But this may lead to excessive expansion and to problems, both on the technical level and with respect to the merits of the matter, in connection with the introduction of branch production functions. The necessity of having to work with a significantly increased number of coefficients can easily deprive the model of its proper meaningfulness, that is, its applicability in planning practice.

Finally it is necessary once more to stress that any expansion of the model must be conducted with great circumspection in order not to loose too much of the translucency of model design for the sake of gains in the precision of results. This design must give the possibility of presenting the operating principles of the model to the planner in such a manner that it can be explicitly seen why it gives such and such results and not others. This is the prerequisite for the opening of a true dialog between model designers and planners and--which comes to the same thing--for the employment of the model as a tool of analysis in planning work.

9108
CSO: 2600

TRADE UNION OFFICIAL'S REMARKS ON PRICE CONTROLS NOTED

Warsaw PRZEGLAD ZWIAZKOWY No 10, Oct 79 pp 21-24

[Article by Waclaw Sasin, Chief Inspector, CRZZ Social Control Inspectorate: "Observations on the Social Supervision of the Control of Prices"]

> [Text] The general line of the price policy, programmed by the Second PZPR Conference, aims to reinforce the reality of the purchasing power of the broadest mass of the people. In this action prices become the instrument to shape the supply of the broadest possible assortment of goods and foodstuffs as well as services.
>
> In the opinion of the author of the present publication for prices to effectively fulfill this role, uniform, strict criteria for their establishment and the socializing of making of these decisions should be simultaneously introduced with the partial decentralization of price decisions. The author among other things proposes the inclusion of the trade-union units in the sectors as well as in a territorial cross section in the process of establishing prices. This proposition has many opponents. They believe that the role of the trade unions should lie mainly in the social control of the local mechanisms as well as in educational action of the workers' self-management in the plants in such a manner that the social interest occupies first place. We submit the matter to our readers for discussion.
>
> Editor.

The process of creating prices, however directed and controlled centrally, does not always proceed in the intended, uniform manner, because situations arise in which external factors independently stimulate the necessity for the most varied solutions.

Prices are supposed to fulfill a series of functions. They are supposed to influence the correlation of the dynamic of growth of demand for a given material goods, for goods of a higher order, for selected foodstuffs, in assortments whose quantity does not permit the complete satisfaction of social needs and of many other so-called deficit goods and services. Social policy directs giving priority to prices of general basic consumer goods and services, for example bread and grain products, meat and meat products, dairy products, potatoes, etc. This also affects the production of industrial consumer articles such as for example ordinary footwear, clothing, as well as typical services and payments, for example rent, payments for heat, gas, light, water, public transportation, postal charges, etc. Social preference also affects the system of prices for goods intended for specific groups of the population, for example for goods purchased for infants, schoolage children, etc.

This variety and complexity as well as interdependence of the above mentioned examples of the chief functions of prices assigns them the role which they are supposed to fulfill in the social-economic broad, dynamically developing participation in the international division of labor.

This affects our share in CEMA, as well as trade and cooperative relations with countries settling their accounts in convertible currencies which are characterized by significant oscillations in their rates. We are also importers of large quantities of materials as well as purchasers of modern investments and licenses which in the question of prices concerning us have the property of being components of the costs of production with a continually dynamic growth, for example crude oil, rubber etc. The interest paid on foreign credits, as well as the cost of amortizing the imported investments and licenses are also such components.

In the conception of the decentralization of establishing prices, which took place during the period of the introduction of the system WOG [Large Economic Organizations] the desire appeared to protect against unnecessary rigidity in favor of elasticity of the solution. This was supposed to free production initiative and broaden the variety of the production of new items. This conditioned the creation of effective, well functioning and penetrating control of prices in the process of their establishment, as well as their application. This task fell on the modest numbers of the staff of the State Price Commission and other organs of state control, and among these also the control of the workers' self-government.

In 1974 comprehensive control was carried out in 98 large industrial plants with a goal of determining the programs for the development of market production, establishing the prices of new items, and relatively of other retail prices. It was determined that the greatest percentage of new items appear in the production of the clothing industry, where they comprise about 50 percent of the products, knitted hosiery--36 percent, leather--about 30 percent.

This control showed the procedure for ordering raw materials and other materials is too long and burdensome; taking, six to nine months, and about 12 months for imported materials. The very process of certifying the models for new packaging lasts about six months.

At that time, a series of improprieties and a significant number of baseless price increases were discovered. As a consequence, this caused annulled the rights of some association directors to establish prices and temporary restrictions of the rights were also applied. Attention was also drawn to articles from groups of new items where price changes were discovered in the technical parameters without any changes; moreover, the growth of prices sometimes reached 60-70 percent.

In order to eliminate these improprieties and in order to prevent them in the future, Resolution No. 130/73 of the Council of Ministers introduced the principle of transferring any unwarranted profits to the state budget.

Strict criteria in the form of limitations of authority to establish prices and economic sanctions somewhat slowed the tendency to manipulation in the direction of increasing prices. In 1978 the staff of the State Price Commission carried out 7,800 inspections in which the correctness of the establishment and application of around 110,000 prices were examined. The most improprieties were discovered in industrial enterprises and in labor cooperatives, for example of the 860 units investigated, offenses of various kinds appeared in 530 (61.5 percent). In service units this index amounted to 52 percent and in retail ones about 35 percent. The control of the correctness of the establishment of prices in more than 27,000 cases show that in about 26 percent, prices were increased too much.

Control of the application of prices is currently being conducted on a significantly broader scale; for all of the inspection organs of the state (in various aspects, for example quality, designation of type, correctness of weight, etc.) and social inspection, which the Public Control Commissions, recently established at the National committees, are patronizing with good effect.

The improprieties found are chiefly the result of the conscious excess increase of the cost components, which endangers the interests of the state and people. In the application of prices a particularly large excess increase of prices appears in the sale of vegetables, fruits, green vegetables, and so-called early vegetables, and flowers. In combating the improprieties, the activity of the trade-union social control is supported by the participation of the MO [Citizen's Militia], PIH [State Trade Inspectorate], and the staff of the State Price Commission. Individual citations are applied on the spot and as a result of decisions on cases by the Collegium for Misdemeanors. There are 6,000-8,000 cases yearly, and the size of the fines reaches 3,200 zl., and those imposed by courts amount to 5,000 zl.

A second list of producers who improperly establish prices, point to the necessity of further socializing price decisions. It seems that these matters should be addressed to the trade unions of those industrial sectors in whose purview the production of retail goods and services fall. For, they should be the direct representative of the interests of the working people in these situations, as for example in the Association of the Leather Industry in Lodz where with a growth of the sales of footwear by 6.8 percent, a drop in the quantity of shipments for the market by about 1.9 percent with a simultaneous growth of the average retail price of standard footwear by 8.8 percent and of the so-called fashion group by 26.5 percent occurred. It must be added that in individual cases the prices were 45-60 percent higher than the prices resulting from the costs.

In the Association of the Industry of Technical and Luxury Articles cases of the excess increases of the costs in the calculations supporting the price proposals were found. For similar actions in the Association of the Construction of Chemical Apparatus Metal-Chem the management of the Association and other workers responsible for the correctness of the calculations of prices were punished with a reduction of the premiums. The director of the Association and his authority to establish prices withdrawn.

As a result of the investigation of 480 cooperative plants improprieties were found in 249 cases. Unwarranted benefits from the sale of products at increased prices here amounted to several million zloty which had a significant influence of their financial results. For example, in the Spes Cooperative, the prices of 12 cooperative products were raised which brought in an improper profit of an amount around 4.4 million zloty. In the services where prices have shown a constant rising trend, the dimensions of the improprieties require the strengthening of the control--not only post factum, but also during the course of the very process of their establishment. This probably is a task for the WRZZ [Voivodship Council of Trade-Unions].

The results of the control in 1978 indicate that, in spite of the application of sharp sanctions and the execution of the transfer of illegally achieved profits to the state budget, the practice of raising prices to levels which bring damage to the national economy and the people still exists. In the society-wide interest it is necessary to reign in this high-handedness. This can be done by centralizing price decisions in where it concerns some kinds of products and placing them in the State Price Commission or also by strengthening the supervision of the correctness of their establishment. Action in this area of prices must be rebuilt with the participation of the representative organizations and thus of the trade-unions and the organs of workers' self-management on the basis of partnership in the establishment of prices. It is also worthwhile to consider whether from the legal point of view the conscious action of falsifying the costs components for the gaining of high prices could not be treated as intent to defraud.

As regards prices for goods of the vegetable market and services, the voivodship Council of the trade-unions, outfitted with the current analysis of the prices and the condition of the family budget, should be a full-fledged partner of the organs of local authority. The Public Control Committees, and the trade-union control which is taking shape in them, should in a broader range and more frequently undertake control of the legality of the applied prices and price lists, the correctness of the marking of the goods with prices, the name of the producer, etc., and they should also broaden the degree of cooperation with the MO and the organs for combating increasing of prices in the bazaar trade. It also appears that in the system and in the process of economic education forms of training explaining the complexity and specificness of price problems especially for active members of the workers' self-government and the union aktiv should be developed.

9329
CSO: 2600

EVOLUTION OF WAGE POLICY OUTLINED

Warsaw POLITYKA in Polish No 44, 3 Nov 79 p 5

[Article by Jerzy Kleer: "Evolution of Wages"]

[Text] Wages are the main component of income. It is true that they do not fully reflect the living conditions of the population, nor the range and span existing between them (discussed in an article published in Issue No [illegible] of POLITYKA), but presentation of extended statistics enables one to comprehend the policy pursued in this area.

One of the main features of policy of the 1970's is a high growth rate in nominal wages. If a value of 100 is assigned to the income level in 1970, in 1978 income reached 253 in the socialized sector, which means an average annual growth rate of approximately 12%, while the income value figure for labor in private-sector agriculture was 217, that is, an annual average increase of approximately 10%. Annual increase in pay in the socialized sector was 17% greater than in private-sector agriculture. Comparing real income in both sectors (for the same period of time), we obtain the following figures: wages -- 189; real income from private-sector agriculture -- 138, that is, the average annual growth rate in the socialized sector was 8.3%, and 4.3% in agriculture. Differences in real income were consequently much greater than in nominal income.

The growth rate of average net nominal wages in the socialized economy was high in the 1970's, amounting to 8.5% annually. The average monthly wage in 1970 was 2,235 zlotys, while in 1978 it was up to 4,686 zlotys. Just as any average quantity, wages cover large internal differences caused both by a differing growth rate and different absolute level in separate sectors of the economy.

Persons employed in the following areas had the highest wage growth rates in comparison with 1970: financial and insurance (273); forestry (236); agriculture (224); government and administration of justice (210); transportation and communications (205); education (196); culture and the arts (195); trade (195); industry (194); science and technology (189); construction (187).

The reasons why wages increased in some sectors more rapidly than in others were quite varied. The major factors involved level of absolute wages measured in zlotys, and consequently a policy of somewhat reducing existing differences, plus the importance attached to a given sector in social and economic development.

Growth of average wages in certain sectors, however, does not answer the question of absolute level of wages within a sector structure. Average net wages in the socialized economy increased as follows:

	1970	1978
Overall	2235	4686
Foreign trade	2726	5376
Science and technological development	2718	5384
Construction	2675	5298
Administration of justice	2651	5397
Industry	2389	4942
Transportation and communications	2281	4837
Government administration and administration of justice	2243	4898
Finance and insurance	2200	3847
Housing administration and management	2142	4195
Municipal services		4711
Culture and the arts	2126	4059
Education	1933	3885
Domestic trade	1924	3808
Agriculture	1867	4974
Physical culture, vacation travel	1782	4077
Health care and social services	1735	3588
Forestry	1622	3979

As we can see, rather far reaching shifts have taken place in comparison with 1970. In addition to changes in sequence, there have also occurred rather substantial changes in differentiation of average wages. While in 1970 foreign trade (first place) had an average monthly wage of 491 zlotys above the average for the economy as a whole, and 1,104 zlotys higher than the lowest average wage (persons employed in forestry), in 1978 the differences were as follows: persons employed in administration of justice had an average wage which was 711 zlotys above the average for the economy as a whole and 1,809 zlotys higher than persons employed in health care and social services (group with the lowest average wages). In spite of the fact that differences calculated in zlotys are greater in 1978 than in 1970, the relative spreads were greater in 1970, for the difference between the highest average wage, in foreign trade, was 68% in comparison with forestry, while in 1978 the difference between the highest average wage, that is, between administration of justice and health care and social services, was 50%.

The wage spread between individual branches, however, is very large. In 1970 the following branches occupied the top two positions: the coal industry with 3741 zlotys, and the nonferrous metals industry with 2991, while the bottom two positions were occupied by the garment industry -- 1857 zlotys, and the paper industry -- 1959 zlotys. The spread calculated in zlotys between the first and last branch was 1884 zlotys, that is, 101%, much more than in the economy as a whole (68%). In 1978 there were no changes in the order of the top two and last two places: the coal industry continued to be in top position (8413 zlotys), while the nonferrous metals industry was in second place (6338 zlotys); the last positions were the garment industry (3771 zlotys) and the paper industry (4033 zlotys). The spread between the first and last branch, however, had increased (in absolute value) to 4642 zlotys, a difference of 123%. We should draw attention, however, to the fact that these differences would have been much less if the coal industry were omitted.

One can also consider wages from the standpoint of structure of employment on the basis of wage amount. The most recent statistical yearbook shows the following wage structure for persons employed in the socialized economy (as percentages):

	1970	1978
2000 zlotys and less	45.9	3.1
2001-3000 zlotys	36.7	15.7
3001-4000 zlotys	11.7	23.0
4001-5000 zlotys	3.5	21.3
5001-6000 zlotys	1.4	14.1
6001-7000 zlotys	0.5	8.9
7001-8000 zlotys	0.2	5.4
8001-10,000 zlotys	0.1	4/9
10,001-12,000 zlotys	0.1	2.0
12,000 and more		1.3

We can see a strong shift in percentage of persons employed from the wage groups below 4000 zlotys (94.3% in 1970). In 1978 these same groups accounted for only 41.8%, half less than in 1970. For all practical purposes the bottom group was eliminated. The percentage weight shifted, on the other hand, to wage groups from 3000 to 6000 zlotys, which contained 58.7% of the total work force.

The two following comparisons are even more significant: those wage groups which are currently average (4000-6000) contained 4.9% of the total work force in 1970, and 35.7% in 1978; the groups above 8000 zlotys contained 0.2% in 1970, and 8.2% of the total work force in 1978.

High and low wages show different structures in different sectors of the economy. I shall cite just two sectors with the highest incomes: science and technology, in which 9.7% of the work force are paid less than 3000 zlotys, and 12.4% are paid above 8000 zlotys, and construction, in which

11.2% earn less than 3000 zlotys, and 12.9% earn more than 8000 zlotys. On the other hand, in education 30.4% earn less than 3000 zlotys, while 1.8% earn more than 8000; in health care and social services 50.7% earn less than 3000 zlotys, while 2.3% of the work force earn more than 8000 zlotys.

The above information does not give a complete picture of wage difference nor of the trends in wage evolution; we have not discussed income from more than one job, as well as other sources of income. In spite of this, however, the following conclusion is suggested: the 1970's have been characterized by a high rate of growth of nominal wages, with considerable wage differences; the absolute differences between different sectors of the economy have increased, while the relative difference has decreased. Both differences, however, have increased in industry proper.

3024
CSO: 2600

POLAND

EXCESSIVE JOB CHANGING, WORKER INSTABILITY ANALYZED

Warsaw POLITYKA in Polish No 44, 3 Nov 79 p 7

[Article by Wojciech Sitek]

[Text] When reading certain articles in the press or listening to the declarations made by the managers of offices and enterprises it is easy to conclude that the influence of witches on the labor fluctuation constitutes an important mechanism of our socio-economic life. The mechanism of an excessive labor mobility is presented in these pronouncements as the result of a conspiracy of secret evil powers in conjunction with the evil intentions of the employees.

There is only one step from there to blaming various crooks for general difficulties experienced by the employers. It seems to me that the explanation of real social phenomena through pathology, evil intent, etc., means, in effect, pushing back our knowledge of social reality into the metaphysico-theological epoch.

The process of labor fluctuation is directed from the inside by a smart mechanism. I will sketch this mechanism by referring to the results of my studies, carried out over a prolonged period of time in one of the major industrial enterprises. Let us call the mechanism a factory. The mechanism is of a general nature; the data from the factory will illustrate it only. I compared the status of mobile workers with the status of stable workers. The latter were comprised of those employees whose seniority reached 15 years, the former of those who left their jobs within 1 year.

The Features of Mobile Workers

This mobile group cannot be described as a bunch of crooks or free men who do not sow or till the land, but only make trouble for the employers. Mobile workers on the average have one more child than the stable workers, and their average home contains 6 people, that is almost 3 more than the families of stable workers. Perhaps, then, greater mobility is the means to satisfy greater needs of bigger families?

This hypothesis makes sense when comparing the housing situation of both groups. The families of mobile workers have nearly 1 room more to their disposal. Moreover, their apartments have higher standards, and are better equipped. This is an important indicator of greater wealth and bigger needs. Among the mobile workers the new hires have a little bit worse housing situation than those who leave. It seems, then, that statistically that workers who leave the factory are those who during their tenure there were able to improve their housing situation.

Difficulties in commuting occupy the second place on the list of reasons for job changes, according to the Main Statistical Office [GUS] studies. It can be expected, then, that people who have been working in the factory for 15 years commute shorter distances than those who leave. One can rationalize, for example, that since these people do not change their jobs they are not affected by the difficulty mentioned by those who leave. Nothing can be farther from the truth, however, for it appears that people who leave their jobs in the factory spent on the average one half an hour less on commuting than workers who have been working there for 15 years.

Thus, objectively better commuting conditions are viewed negatively by the mobile workers, while objectively worse commuting conditions are regarded as sufficiently good by the stable workers who do not find these conditions encouraging enough toward a job change. This is an important indicator. It points to the fact that the mobile workers use a different scale of values than the stable workers. This is also demonstrated by the fact that among the mobile workers there are twice as many people who are dissatisfied with their family situation than among the stable workers. But there are also many more very satisfied among them. Thus, everything points to the fact that we are dealing here with greater criticism and sharper evaluations, both so characteristic for this group.

One of the important traits of the people coming and leaving the factory is their generally great professional mobility. Not only have they worked in many places, but they have also occupied many different positions in the past. Thus, for the average person leaving the factory there were 5.5 positions and 4.5 places of employment. For the new hires the respective figures were 4.5 and 4.3. However, for the stable workers the respective figures were 3.2 and 1.7. It should be added here that the average figure for the stable workers consists mainly of promotions given to the administrative staff, engineering and technical personnel and to mid-level managers. However, for an average stable worker there is only 1.3 positions. Thus, a worker who spends 15 years in the factory in addition to not being promoted does not change his position as well.

This information can be interpreted in many ways. There is no doubt, however, that there are very few employees, who after changing jobs several times change their habit and become stable workers. The change of the place of employment seems to be a lasting predisposition clearly strengthened by the fact that through wandering comes the change in performed duties, promotions as well as higher wages.

The Benefits of Wanderings

There is probably no major place of employment in our country where a resident sociologist would not be forced to deal with the problem of job changing or fluctuation. Conducting a study covering the entire enterprise allows an activation of alarms signalling what is wrong in individual divisions, departments or units. It is not true, however, that when we ask an employee why he is quitting his job that we get truthful information.

Over one half of the employees asked the question: "Do you think that there is a difference between the reasons given by people quitting the factory--e.g. when filling out the separation papers--and the true reasons for quitting?" answered in the affirmative and pointed out in answers to other questions that people give reasons which put in motion a conflictless mechanism of a job change. Thus, we gather rather information on how employees imagine reasons which could be considered by employers as important enough for a job change. It should be pointed out also that resident sociologists, geared to resolutions of immediate problems, often do not see that the mobile workers class is comprised of not just those who quit work, but also of those who accept it. Thus, they are persuaded by the management to a curious viewpoint, namely that a person accepting a job is a good employee, and the one who quits is a bad one. Therefore, everything points to the fact that the information about the motives for leaving a job does not offer real causes for the workers mobility. It seems, however, that such causes can be found when comparing the reasons for job acceptance by both the stable and mobile employees.

The most often mentioned reason by the stable employees for accepting work at the factory was that it was the closest to their homes place of work (nearly 30 percent of the stable employees mentioned that). Two other most popular reasons given point to the magnetic role of the big industry and the attractiveness of the factory (8 percent) with answers such as this one: "I was able to get a job commensurate with my interests, ambitions, and education" (8 percent). However, the mobile workers (both the coming and going ones) give the financial motive as their first reason (19 percent of the coming, and 22 percent of the going), then good transportation enabling fast commuting (13 percent). The third reason given by the mobile workers was the opportunity to get an apartment through the assistance of the factory management.

What conclusions can one draw from the above comparison? It seems that without risking an error it can be assumed that the mobile workers differ from the stable workers in their motivation for taking a job. The stable workers have a passive attitude toward their job-related reality. They look for the fulfillment of their aspirations through a higher-level work in given conditions. The mobile workers exhibit a clearly materialistic and utilitarian attitudes related to a more active look at the reality. They continuously change their places of employment in order to accomplish their utilitarian goals. Are they on the right track? Many factors show that yes, they are, although this matter certainly requires further studies. And these are not simple, for it is not always easy to get access to proper information, e.g. concerning wages of the employees. For often a higher wage in a new place of work is in violation of the existing labor law. Also, information about wages provided by the employees themselves are greatly distorted.

However, preliminary information obtained--which awaits a more systematic confirmation--reveals that the wages of employees changing jobs increase faster than the wages of the stable workers within the same period of time. A job change is often the only opportunity for a promotion. This factor is naturally of fundamental importance in discounting the myth of the mobile workers as crooks. It also may constitute a good starting point for an analysis of the internal stability of personal and organizational structures in a place of work. In most cases they remain constant even after a change of the top management.

Intelligence and Dynamics

How does it happen that some people discover the mechanism of a better fulfillment of their utilitarian and material needs through job change and take full advantage of it, while others seem to be happy with things obtained through stabilization, even at the expense of a faster material advancement? (By the way, what do these people gain through job stability is a question worthy of a separate study). I will focus here on one feature only which clearly and surprisingly distinguishes between the mobile and stable workers. It was a simple I.Q. test. While retaining skepticism toward tests we cannot remain indifferent toward the results which clearly differentiate between the stable and mobile workers on the same educational level. For example, in one test for workers with elementary education the stable workers earned 4.1 average (out of 9 points possible), while the new hires in the factory scored 5.4, and quitting employees scored 6.5.

The differences are distinct and tell us that greater worker mobility coincides with greater ability to solve certain intellectual tasks. Possibly we are talking here of a 2-way feedback: frequent changes of places of employment and of duties performed are conducive to development as well as develop the ability to solve new and unexpected tasks, teach accommodation to changing reality, and transformation or change of reality. From this angle the mobile workers undoubtedly constitute a factor introducing dynamics to enterprises in which they work.

"When talking about means preventing mobility of work crews it is necessary in the first place to discuss its ramification. It is necessary to remember that workers mobility has negative sides as well as that it has positive ones, too, that what can be disadvantageous to an enterprise can be at the same time advantageous to an employee, that mobility disadvantageous to an enterprise can be advantageous to the economy as a whole.... The undesirable effects of work crew mobility cannot be successfully dealt with by individual actions of various enterprises. An activity directed toward a reduction of worker mobility to the indispensable level must take into account the situation in individual production branches as well as in separate enterprises. I think that this statement, made by Adam Sarapata in 1961, has not lost its applicability to the present conditions. Also, the results of studies summarized above allow to conclude that labor mobility has two sides: positive and negative. They also point out that negative labor mobility in one enterprise cannot be eradicated by concerted efforts in this enterprise only, although it is possible and necessary to affect labor mobility on an enterprise level. It requires, however, discarding a belief in witches.

Everything points out to the fact that from the point of view of the general interests of an enterprise it would be necessary to keep the mobile workers for a longer time. They can provide an enterprise with a valuable element which adds dynamics to the existing structures, introduces new and modern solutions. However, due to their generally utilitarian attitude such a detention of mobile workers in an enterprise must be always done at the expense of a long-tenured crew. To a degree this mechanism is already at work which is exemplified by a comparison of the housing situation of both groups. However, lack of control over this mechanism may lead to the elimination of the less active and dynamic stable workers from their just sharing of the consumption fund, executed in every enterprise.

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MOTOR FUEL CONSUMPTION, CONSERVATION STEPS VIEWED

Warsaw TRANSPORT I DROGI in Polish No 47, 26 Nov 79 pp 2-3

[Article by J. P.: "Fuel Problems"]

[Text] The share of fuel-material costs in our economy continues to be high and indications are that it will grow still further. It is now almost 70 percent of total costs. Under these circumstances, with fuel costs steadily rising and demand not falling, methods must be found to insure more efficient utilization of gasoline and diesel fuel. This is an area of large and unutilized resources.

The significance of this fact becomes obvious when we look at the statistics: In 1960 we imported 714,000 tons of petroleum and in the past year the figure was over 16,600 thousand tons. During this period fuel and energy imports grew from 455 million to 6,562 million foreign exchange zlotys. The guidelines for the Eighth Party Congress state that during 1971-1980 yearly processing of petroleum will increase from 7.5 million tons to almost 17 million tons. It should be added that during 1971-1978 petroleum prices rose 6.5-fold, i.e., an average of 26 percent per year.

A large share of liquid fuels is consumed by socialized motor transport, in which, during this decade, the number of trucks increased greatly--from about 270,000 vehicles in 1970 to 580,000-600,000 in 1980. Steadily expanding individual motorization also consumes more and more fuel. In all, motor transport consumes 50 percent of all liquid fuels.

The Eighth Party Congress guidelines state that an important factor in improving management efficiency is efficient utilization of liquid fuels so as to reduce the energy-intensiveness of production and transport. By seeking out resources and employing stricter measures for conserving energy and fuel raw materials, the unitary consumption of imported liquid fuels should be reduced 6 to 8 percent during 1981-1985. It is also anticipated that during the same period the chemical industry will process 21 to 22 million tons of petroleum each year.

It is forecast that in 1980, 10,500 thousand tons of fuel will be required to satisfy the needs of motor transport and motorization; and 15 years later (these are last year's figures) the demand for motor fuel will exceed 27 million tons. These are crucial demands and no less crucial expenditures from the national budget.

That is why it was decided that effective economo-technical mechanisms be created to permit efficient utilization of liquid fuels in motor transport haulage. The realization of an entire series of measures was proposed.

One of them was the move of the Main Inspectorate of the Power Industry (Glowny Inspektorat Gospodarki Energetycznej) which recently conducted a broad nation-wide inspection of motor-fuel management. Certain PKS (Polish Motor Transport) departments and road transport terminals were included in these very useful inspections.

Some extremely interesting material was collected. The inspection data will be used to establish new rules that will facilitate improvements in motor-fuel management efficiency. First of all, rules should be established for proper elimination of wornout trucks and buses in the departments and transport terminals, taking into account, of course, the hauling needs of the economy and the need to restrict the unwarranted use of spare parts in wornout vehicles. Many PKS departments and road transport terminals suffer serious losses in this area. By using wornout vehicles, they increase the prime costs of their hauls. This subject, which is under the aegis of the Institute of Motor Transport, should be developed, examined, and put into effect as quickly as possible.

It is also necessary (and our editors have made this suggestion several times) to examine and analyze inventions and proposals submitted over the last couple of years concerning reductions in liquid fuel consumption by improving ignition and fuel supply systems. The Institute of Motor Transport has already done some valuable scientific research and production work on economical consumption of liquid fuels. It has produced four roller devices for inspecting vehicles after major overhaul and has developed a prototype device for measuring fuel consumption. Unfortunately, the valuable beginnings ended right there. No one is willing to undertake production of these useful devices. Nor is there a service center that would order production. The question of who should order and who should produce this equipment remains unanswered. For how long?

Perhaps the appropriate authorities in the Ministry of Transportation should contact the Ministry of Machine Engineering Industry. This Ministry, in working to develop the production of modern service-repair and diagnostic equipment, has decided to greatly intensify activity in this field. POLMO, the Association of the Automotive Industry, is the coordinator in these activities. It is expected that in 1982 this new equipment will be produced at a cost of 920 million zlotys, whereas in the past year the value of similar production was 330 million zlotys.

The design activities being conducted at the Industrial Institute for Automation and Measurement on measuring devices for checking liquid fuel consumption are extremely interesting. A fuel gage, a small apparatus mounted in the vehicle, shows fuel consumption per 100 kilometers at every moment of travel and enables the driver to drive economically. We know, of course, that high speeds and sudden starts and stops burn more fuel and increase costs. The fuel gage tells the driver exactly how he is driving at any moment. Regrettably, there is still no decision on mass producing this gage. Presumably the Measurement Apparatus Factory in Krakow was preparing for production, but the matter has died.

Equally valuable are the scientific research activities on new carburetor designs and on improvements in combustion efficiency of liquid fuel, being conducted by the Industrial Motorization Institute. Many improvements were instituted last year. Of particular interest are tests with prototypes of dual-fuel carburetors for operation on gasoline and methanol.

The Ministry of Machine Engineering Industry has announced that it has completed tests on wide-scale application of a gasoline plus 10-15 percent methyl alcohol mixture. No important design changes are necessary in using this mixture. Only an ignition and carburetor adjustment is required. The drawback here is that the motor is difficult to start at low temperatures.

The experts at this Ministry advocate another fuel that has also been tested--ethyl alcohol, fit for human consumption. It has an advantage over methanol in that it has twice the calorific value and a lower ignition temperature, making it more useful. It can be made by a very simple process, e. g., from potatoes.

These few examples show that a great deal is happening in the scientific research field, but at the same time some improvements are not being taken advantage of, are not being put into everyday use. The time has come to change this and to better relate scientific research to practice. There should also be a mutual exchange of experience between the research institutes and the technological institutes, who are frequently operating on an "everybody for himself" basis. The dispersion of skills and funds results in duplication of research and does not always mean that studies reflecting latest developments will be available sooner.

This is particularly important in view of the government decision stemming from the comprehensive program for improving management efficiency in motor fuels and lubricants during 1980-1985.

At the same time some necessary and effective measures and actions are being undertaken to prevent waste in motor liquid fuel management. The primary and basic problem is that of responsibly managing the motor fleet and above all, insuring high-quality service-repair work. Almost all road inspections bring sorry findings. One need only to look at the clouds of thick, black smoke belching from the exhaust pipes of many buses and trucks and hear the loud knocking of the engine valves to know that fuel, our hard-earned foreign-exchange money, is being wasted. And this is money that the driver loses, the negligent service station worker, all of us.

It should also be remembered that proper engine adjustment cuts fuel consumption a good 15 percent! Accurate adjustment of the fuel system is most important. However, despite constant reminders, the technical crews of the PKS departments and road transportation terminals still do very little in adjusting fuel systems. The complaint of service-repair stations in the transport enterprises is lack of diagnostic equipment. True, but even what equipment there is is not being put to good use. That is one of the reasons why so many trucks and buses still burn excessive amounts of motor fuels and oils.

Improvement in the structure of the truck fleet is also very important. More vehicles with high-compression engines and greater load capacity are needed. These are two critical factors in reducing gasoline consumption. High-compression drive makes it possible to use a motor oil much cheaper than gasoline, and also provides a fuel savings of 20 to 40 percent, as compared to carburetor drive. On the other hand, replacing a 6-ton load capacity truck with a 15-ton truck for specified hauls reduces fuel consumption threefold.

In the initial pre-Congress discussions by roadmen and transport workers, the subject of economical fuel consumption keeps coming up again and again in the leading topics. This is a good omen, especially since the proposals and suggestions that are being made require small, if any, outlays, to put them into effect and the returns are all profit. Most often only simple organizational or technical changes are necessary.

9295
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POLAND

BRIEFS

TRADE WITH VENEZUELA--Credit for the importation of Polish products has been offered by the Polish Commercial Bank [Bank Handlowy] to Venezuela, through the Institute of Foreign Trade (ICE). For this purpose the president of the BEP [Polish Commercial Bank], Marian Minkiewicz, talked with the director in charge of the ICE, Dr Pedro Antonio Echeverria, to whom he expressed Poland's interest in strengthening economic relations between the two countries. The Polish banker also met with representatives of the country's commercial banks and expressed, as he did to the ICE, particular interest in opening future lines of credit to permit Venezuela to import Polish products. Minkiewicz indicated that Venezuela could import capital goods from his country, especially mining equipment, which could be used in the coal project in the state of Zulia. The president of the BEP showed interest in the possibility of importing Venezuelan iron ore, a raw material of great importance to Poland. [Text] [Caracas EL NACIONAL in Spanish 26 Nov 79 p D-15] 8735

CSO: 3010

OVERALL AGRICULTURAL, FOOD PRODUCTION SURPASS THAT OF LAST YEAR

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 6 Dec 79 p 3

[Excerpt] The total volume of agricultural production this year will considerably surpass that of last year when production was 5 percent below the plan, said Dr Branko Jovanovic, deputy president of the Federal Committee for Agriculture. This year production is expected to be 5 percent more than last year with crop production 8 percent higher, livestock production 2 percent higher, and processed food 7 percent higher.

Despite the decline in wheat production, a satisfactory level of increase in crop production is expected, thanks to the fall crop harvest. The best results were achieved in corn production which amounted to 9.8 million tons, or 2 million tons more than in 1978. The sugar beet harvest, which is nearing the end, is expected to be between 6 million and 6.3 million tons, resulting in the production of 730,000 tons of sugar. Although the planned production of 600,000 tons of sunflowers was not attained, 570,000 tons will be harvested which is completely adequate for the production of 240,000 tons of oil, including 50,000 tons for export.

This year, total meat production, not including pork, is on last year's level. Production of meat from pigs is somewhat lower largely because of high price disparities. Despite problems in milk supply, Jovanic said, milk production has not declined. The reason for shortages is inadequate state procurement of milk and increased processing [of milk into other products]; 4.1 billion liters of milk has been produced and about 25 percent of total production has been bought up from the private sector. The shortage of certain food products has been caused by disorganized trade more often than by inadequate production.

Good production has also been achieved in bulk animal feed, fruit and vegetables.

Agricultural and food production is expected to increase 3 percent in 1980, whereby crop production should increase 4 percent and livestock production 3 percent.

In regard to fall planting, 1.5 million hectares of wheat have been planted up to now, or 90 percent of the 1,668,000 hectares planned. The best results were achieved in Slovenia. At the same time, somewhat over 90 percent of the planned area in Vojvodina has been planted and even more in Croatia.

CSO: 2800

REDUCTION OF CULTIVATED AREAS

Belgrade PRIVREDNI PREGLED in Serbo-Coratian 7 Dec 79 p 8

[Excerpt] As a result of the steady decline in the area under agricultural cultivation, tens of billions of dinars are being lost annually. From 1968 to 1978 the areas under cultivation declined from 7,550,000 to 7,204,000 hectares. Or, in 1968, 488,000 hectares were not cultivated, (6.5 percent of all arable land), while in 1978, 670,000 hectares were not cultivated (9.3 percent of the total). Most uncultivated land is in the private sector, but only because most of the land, overall, is in the private sector. For instance, in 1977, 609,000 hectares of the total 7.2 million hectares of arable land in the country were not cultivated. But of the 5.9 million hectares in the private sector 456,000 were not cultivated, (or 77 hectares per 1,000 hectares), while of the 1.2 million hectares in the socialized sector, 152,600 hectares were not cultivated (or 124 out of 1,000 hectares). Thus, there is a far higher percentage of uncultivated land in the socialized sector which has higher-quality land and in larger contiguous areas than the private sector with a large number of older farming households and fragmented plots of poor quality.

In 1977 Macedonia had an average of 257 hectares uncultivated for every 1,000 hectares of arable land ([an average of] 451 hectares in the socialized sector and [an average of] 226 hectares in the private sector); [all following in average terms] Bosnia-Hercegovina had 197 hectares of every 1,000 hectares of arable land (30 in the socialized sector and 192 in the private sector); Montenegro had 162 uncultivated hectares per 1,000 (229 in the socialized sector and 159 in the private sector); Croatia had 91 uncultivated hectares per 1,000 (191 in the socialized sector and 67 in the private sector); Serbia proper had 37 uncultivated hectares per 1,000 (92 in the socialized sector and 32 in the private sector); Kosovo had 31 hectares per 1,000 (125 in the socialized sector and 22 in the private sector); Slovenia had 29 in the socialized sector and 18 in the private sector (per 1,000), while the average for the republic was 19 hectares of uncultivated area per 1,000 hectares of arable land; Vojvodina has the most favorable status with 14 uncultivated hectares per 1,000 (24 in the socialized sector and only 7 in the private sector).

CSO: 2800

BRIEFS

WORKERS ABROAD--In the last 5 years almost 400,000 [Yugoslav] workers returned to our country from work abroad. Most of them came from West Germany and Austria because that is where most of our workers are. In the same period about 100,000 went abroad from Yugoslavia or, as family members of our workers abroad, got jobs there. Thus, the number of Yugoslavs working abroad has declined from 1.1 million to 800,000. Most of our workers are in West Germany (360,000), Austria (118,000), Australia (90,000), and France (60,000). In this 5-year period the number of our workers abroad declined but the number of members in their families increased. There are now over 400,000 dependents abroad, and over 10,000 children of Yugoslav parents are born annually in West Germany. Employment of returnees [to Yugoslavia] has increased from year to year; this year about 70 percent of our returnees got jobs here. It is unfortunate, however, that those who return are predominantly unskilled, old, worn-out, and disabled, for whom it is difficult to find employment. [Excerpt] [Belgrade RAD in Serbo-Croatian 26 Nov 79 p 8]

TRADE WITH LIBYA--In the first 10 months of this year Yugoslavia exported about $82 million worth of goods to Libya (or 22 percent less than in the same 1978 period) and imported about $106 million worth (or over four times more than in the same 1978 period). This problem is expected to be discussed when representatives of Libya visit Yugoslavia in the first half of January 1980. The Economic Chamber's section for Libya and Malta which met yesterday reported also that this year Libya cannot deliver about 120,000 tons of oil to Yugoslavia, leaving Libya's total oil deliveries to Yugoslavia at 913,000 tons for this year. [Excerpt] [Belgrade BORBA in Serbo-Croatian 6 Dec 79 p 6)

POOLED FUNDS--According to data from March 1979, the amount of associated [pooled] funds increased by more than 5 times compared to 2 years ago, but nevertheless the rate at which this is taking place is much slower than expected or planned, said Jovo Kepcija, president of the Federal Institute for Social Planning. The unsatisfactory results in associating labor and funds was the basic conclusion drawn from a recent discussion in the section for socioeconomic trends and development policy of the Federal Conference of the SAWPY. The distribution of associated funds is also unsatisfactory. Revenue earned on the basis of participation in joint income is very small, amounting to only .23 percent of all distributed income. Especially unsatisfactory is the associating of funds in Kosovo and other undeveloped areas where investments from developed areas represent only 2.11 percent of the total value of fixed and current assets of the underdeveloped areas. The basic reason for the low rate of associating of funds should be sought, it was said, in the inadequately developed system of self-management social planning, in the enclosed nature of the market, inflation, inadequate ability to accumulate capital, low reproductive capability of the economy, and the slow transformation of the credit-monetary sphere. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 7 Dec 79 p 12]

KOSOVO MINE DAMAGE--Overflowing rivers have caused damage to many mines in Kosovo. The pumping equipment in the "Goles" mine in Magura not far from Pristina was flooded, one mine in the "Kopaonik" mines in Leposavic has not been operating for 4 days, great material damage has been inflicted on the "Kisnica" and "Novo brdo" mines but production has not been interrupted. The "Stari trg" mine near Kosovska Mitrovica has managed to prevent mine floods but the pumping equipment in the flotation plant in Svecan has been flooded. Production has stopped because of flooding at the processed-equipment factory in Kosovska Mitrovica, as well as the "Okipor" factory in Kacanik. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 23 Nov 79 p 2]

SHOCK ABSORBERS FOR PEUGEOT--The shock absorber plant in Pristina has successfully started a cooperative production program with the French Peugeot firm; the first 100 shock absorbers from the "Peugeot 385" have been produced and more than 2,500 test shock absorbers will be produced by the end of this month, after which series production will begin. Next year the Pristina plant expects to deliver 300,000 shock absorbers for the "Peugeot 305" and begin to master production of these parts for the "Peugeot 504" and "604". According to the agreement, the Pristina plant should deliver 1.7 million shock absorbers by 1983 but this goal will probably be met before 1983. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 11 Dec 79 p 1]

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